AIR EMISSION PERMIT NO. 06900025-002
Administrative Amendment

IS ISSUED TO

Northstar Agri Industries LLC

NORTHSTAR AGRI INDUSTRIES - HALLOCK
2100 US Highway 75
Kennedy, Kittson County, MN 56733

The emission units, control equipment and emission stacks at the stationary source authorized in this permit amendment are as described in the Permit Applications Table.

This permit amendment supersedes Air Emission Permit No. 06900025-001 and authorizes the Permittee to operate the stationary source at the address listed above unless otherwise noted in Table A. The Permittee must comply with all the conditions of the permit. Any changes or modifications to the stationary source must be performed in compliance with Minn. R. 7007.1150 to 7007.1500, and any additions or changes to conditions incorporated into Minnesota's State Implementation Plan (SIP) under 40 CFR § 52.1220. Terms used in the permit are as defined in the state air pollution control rules unless the term is explicitly defined in the permit.

Unless otherwise indicated, all the Minnesota rules cited as the origin of the permit terms are incorporated into the SIP under 40 CFR § 52.1220 and as such as are enforceable by U.S. Environmental Protection Agency (EPA) Administrator or citizens under the Clean Air Act.

Permit Type: Federal; Pt 70/Limits to Avoid NSR;
Operating Permit Issue Date: 11/30/07
Administrative Amendment Issue Date: July 15, 2008
Expiration Date: 11/30/2012 – Title I Conditions do not expire.

Jeff J. Smith, Manager
Air Quality Permits Section
Industrial Division

for Brad Moore
Commissioner
Minnesota Pollution Control Agency

Permit Applications Table

Permit Type	Application Date	Permit Action
Total Facility Operating Permit	1/19/07, 4/11/07, 6/21/07, 9/24/07	001
Administrative Amendment	12/24/07	002

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NOTICE TO THE PERMITTEE:

Your stationary source may be subject to the requirements of the Minnesota Pollution Control Agency's (MPCA) solid waste, hazardous waste, and water quality programs. If you wish to obtain information on these programs, including information on obtaining any required permits, please contact the MPCA general information number at:

Metro Area	651-296-6300
Outside Metro Area	1-800-657-3864
TTY	651-282-5332

The rules governing these programs are contained in Minn. R. chs. 7000-7105. Written questions may be sent to: Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, Minnesota 55155-4194.

Questions about this air emission permit or about air quality requirements can also be directed to the telephone numbers and address listed above.

PERMIT SHIELD:

Subject to the limitations in Minn. R. 7007.1800, compliance with the conditions of this permit shall be deemed compliance with the specific provision of the applicable requirement identified in the permit as the basis of each condition. Subject to the limitations of Minn. R. 7007.1800 and 7017.0100, subp. 2, notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

FACILITY DESCRIPTION:

The total facility operating permit authorizes Northstar Agri Industries, LLC (Northstar) to construct and operate a canola oil processing facility consisting of a 1,000 ton/day oilseed extraction plant and a 2.7 million gallon/year biodiesel plant, located in Kittson County southwest of the city of Hallock, Minnesota (Facility). It will be located on what is currently cultivated farmland.

The Facility will consist of a 1,000 ton/day canola oilseed extraction unit, a 2.7 million gallon/year biodiesel plant, canola oilseed receiving and handling equipment, two 51.4 million British thermal units per hour (MMBtu/hr) natural gas-fired boilers with propane and distillate fuel as backup fuels, one 8.0 MMBtu/hr natural gas-fired boiler with propane as a backup fuel, a fire pump engine, and a cooling tower.

The Facility will receive raw canola seeds and process them, extracting crude canola oil from the seeds. A by-product of the oil processing is canola meal, which is sold for animal feed. The Facility is designed to process any oilseed but cannot process soybeans. The Facility will be operated to serve the edible oils, animal feed nutrient meal, and biofuels markets.

The boilers will provide steam for the oil extraction. Emissions from the boilers consist of Particulate Matter (PM), Particulate Matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), Nitrogen Oxide (NO_x), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), and Volatile Organic Compound (VOC) emissions. The 8.0 MMBtu/hr boiler supports the 'refinery' portion of the Facility (see further detail below). A small portion of the steam created by the two larger boilers will be used by the co-located biodiesel plant.

Canola oilseeds will be received from local farmers and regional grain elevators via semi-trailer truck and railcar. The canola oilseeds will be off-loaded onto conveyors that will have aspiration and a bar separator with magnet to remove ferrous and large foreign objects before going into on-site elevators. The Facility will have a total oilseed storage capacity of 1.5 million bushels. After cleaning, the oilseeds will be conveyed to temporary storage bins. Emissions in the receiving section consist of PM/PM_{10} emissions from product unloading, storage and transferring and will be controlled by fabric filter baghouses.

In the preparation section, the canola oilseeds are cleaned, conditioned and rolled flat into "flakes". The flakes are conveyed to the flake cooker and heated to approximately 200 Fahrenheit. Cooked flakes are then pressed to release crude canola oil. The remaining "cake" is cooled in the cake cooler and transferred to the extraction section. The emissions in the preparation section consist of PM/PM_{10} emissions from the cleaning, conditioning, and flaking of the oilseeds and will be controlled by fabric filter baghouses or will have high efficiency process cyclones used to recover economically valuable commodities, namely canola and cake.

Inside the extraction building, the cake is washed in an extractor with commercial grade hexane, which strips the oil from the flakes. Two process streams leave the extractor: commercial hexane-laden cake and miscella, which is a mixture of commercial hexane, oil, and water. The miscella is separated into its components – oil, commercial hexane, and water – using distillation processes. The separated oil is termed crude oil, which will be further refined and sold.

Emissions from the solvent extraction section include VOC and PM/PM_{10} emissions from the extraction vent system, Desolventizer-Toaster/Dryer-Cooler (DTDC) vent, and fugitive sources (equipment leaks). PM/PM_{10} emissions will be exhausted from high efficiency process cyclones used to recover the economically valuable meal commodity. A solvent recovery system will recapture the majority of the VOC (hexane) emissions for reuse in the process. After startup and shakedown, the Facility will recover nearly all of the commercial hexane and re-use it in the extractor.

The meal cake is "desolventized" by subjecting the commercial hexane-laden meal cake to heat. The meal is cooled, ground or pelletized, and conveyed to storage bins. The desolventized meal, whether ground or pelletized is sold as an animal feed. The commercial hexane that is driven off of the meal is piped to the solvent recovery system for re-use. A portion of the hexane solvent is "fixed" to the meal during the desolventizing process and cannot be recovered. The meal will be shipped from the site primarily in bulk quantities via trucks and railcars. The emissions in the meal section consist of PM/PM_{10} emissions from the grinding, pelletizing, and loadout of the meal and will be exhausted from high efficiency process cyclones and a process fabric filter baghouse or controlled by a fabric filter baghouse.

The refining process removes gums, colors, tastes, and odorous compounds from the crude oil to produce a product typically referred to as "salad oil". The refining process also produces valuable by-products including fatty acids and distillates. Emissions from the refinery section include PM/PM_{10} emissions from bleaching and filtering. The refinery section will also have one 8 MMBtu/hr boiler that supplies high-pressure steam to the deodorizer process. This refinery boiler will be designed to burn natural gas primarily, with propane as a backup fuel. Emissions from the high-pressure boiler consist of PM, PM_{10}, NO_x, SO_2, CO, and VOC emissions.

The biodiesel plant will receive refined vegetable oil from both the extraction plant and outside sources and process the vegetable oil into biodiesel (methyl esters). The process involves the esterification of soybean oil or other vegetable oils to produce biodiesel using the methanol based catalyst, sodium methoxide. The plant will have two continuous flow reactors for the esterification process.

The biodiesel plant will receive steam from the two large boilers located in the extraction plant. Emissions from the biodiesel plant consist mainly of VOC and methanol from the storage tanks, biodiesel loadout, fugitive, flare, and biodiesel process vent.

All of the process streams in the biodiesel plant are vented to the water absorber, which vents to the atmosphere. The water absorber is designed to recover a majority of the methanol used in the process for reuse. The flare will control VOC and methanol emissions from the methanol storage tank and the biodiesel loadout.

AMENDMENT 002 DESCRIPTION:

An administrative amendment application was received December 24, 2007 in accordance with Minn. R. 7007.1400, subp. 1(B) that requested a change of name for the company owner of the permitted facility. Northstar Bioenergy's corporate name will now be "Northstar Agri Industries, LLC". There is no change in ownership or location of the Hallock, MN oilseed extraction plant associated with this name change.

The permit was also updated to keep all permits issued by the MPCA uniform. The only requirement that needed to be added was a record keeping requirement, Minn. R. 7007.1200, subp. 4.

TABLE A: LIMITS AND OTHER REQUIREMENTS

Facility Name: Northstar Agri Industries - Hallock

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Table A contains limits and other requirements with which your facility must comply. The limits are located in the first column of the table (What To do). The limits can be emission limits or operational limits. This column also contains the actions that you must take and the records you must keep to show that you are complying with the limits. The second column of Table A (Why to do it) lists the regulatory basis for these limits. Appendices included as conditions of your permit are listed in Table A under total facility requirements.

Subject Item: **Total Facility**

What to do	Why to do it
SOURCE-SPECIFIC REQUIREMENTS	hdr
Permit Appendices: The Permittee shall comply with the requirements in Appendices A through E of this permit.	Minn. R. 7007.0800, subp. 2
Fugitive Emissions: Do not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. Comply with all other requirements listed in Minn. R. 7011.0150.	Minn. R. 7011.0150
Fugitive Emissions Control Plan: The Permittee shall develop and comply with a fugitive emissions control plan. The plan shall identify all fugitive emission sources, primary and contingent control measures, and record keeping. The Permittee shall follow the actions and record keeping specified in the control plan. If the Commissioner determines the Permittee is out of compliance with Minn. R. 7011.0150 or the fugitive emission control plan, then the Permittee may be required to amend the control plan and/or to install and operate particulate matter ambient monitors.	Minn. R. 7007.0800, subp. 2
The Permittee shall maintain a designated contact, on-site, for the neighbors to telephone with concerns of any dust. This could be related to dust arising from trucks, either entering or leaving the facility premises as well as from the handling of the outside oilseed storage. Upon such a complaint, the facility will investigate the complaint. Valid dust complaints are to be addressed by reasonable and appropriate mitigation measures. The Permittee shall record all complaints, investigation findings, and mitigation measures taken. A continued pattern of dust complaints may trigger a new PM10 modeling analysis.	Minn. R. 7007.0800, subp. 2
Labeling Requirements: The Permittee shall permanently display on each emission unit the Emission Unit number (EU #) and on each item of air pollution control equipment, the Control Equipment number (CE #). The identifying number shall be legible from a safe distance.	Minn. R. 7007.3000
OPERATIONAL REQUIREMENTS	hdr
The Permittee shall comply with National Primary and Secondary Ambient Air Quality Standards, 40 CFR pt. 50, and the Minnesota Ambient Air Quality Standards, Minn. R. 7009.0010 to 7009.0080. Compliance shall be demonstrated upon written request by the MPCA.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Circumvention: Do not install or use a device or means that conceals or dilutes emissions, which would otherwise violate a federal or state air pollution control rule, without reducing the total amount of pollutant emitted.	Minn. R. 7011.0020
Air Pollution Control Equipment: Operate all pollution control equipment whenever the corresponding process equipment and emission units are operated, unless otherwise noted in Table A.	Minn. R. 7007.0800, subp. 2; Minn. R. 7007.0800, subp. 16(J)
Operation and Maintenance Plan: Retain at the stationary source an operation and maintenance plan for all air pollution control equipment. At a minimum, the O & M plan shall identify all air pollution control equipment and control practices and shall include a preventative maintenance program for the equipment and practices, a description of (the minimum but not necessarily the only) corrective actions to be taken to restore the equipment and practices to proper operation to meet applicable permit conditions, a description of the employee training program for proper operation and maintenance of the control equipment and practices, and the records kept to demonstrate plan implementation.	Minn. R. 7007.0800, subp. 14 and Minn. R. 7007.0800, subp. 16(J)
Operation Changes: In any shutdown, breakdown, or deviation the Permittee shall immediately take all practical steps to modify operations to reduce the emission of any regulated air pollutant. The Commissioner may require feasible and practical modifications in the operation to reduce emissions of air pollutants. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment shall be permitted to operate.	Minn. R. 7019.1000, subp. 4
Noise: The Permittee shall comply with the noise standards set forth in Minn. R. 7030.0010 to 7030.0080 at all times during the operation of any emission units. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Minn. R. 7030.0010 - 7030.0080
Inspections: The Permittee shall comply with the inspection procedures and requirements as found in Minn. R. 7007.0800, subp. 9(A).	Minn. R. 7007.0800, subp. 9(A)

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The Permittee shall comply with the General Conditions listed in Minn. R. 7007.0800, subp. 16.	Minn. R. 7007.0800, subp. 16
PERFORMANCE TESTING	hdr
Performance Testing: Conduct all performance tests in accordance with Minn. R. ch. 7017 unless otherwise noted in Tables A, B, and/or C.	Minn. R. ch. 7017
Performance Test Notifications and Submittals: Performance Tests are due as outlined in Tables A and B of the permit. See Table B for additional testing requirements. Performance Test Notification (written): due 30 days before each Performance Test Performance Test Plan: due 30 days before each Performance Test Performance Test Pre-test Meeting: due 7 days before each Performance Test Performance Test Report: due 45 days after each Performance Test Performance Test Report - Microfiche Copy: due 105 days after each Performance Test The Notification, Test Plan, and Test Report may be submitted in alternative format as allowed by Minn. R. 7017.2018.	Minn. Rs. 7017.2030, subp. 1-4, 7017.2018 and Minn. R. 7017.2035, subp. 1-2
Limits set as a result of a performance test (conducted before or after permit issuance) apply until superseded as stated in the MPCA's Notice of Compliance letter granting preliminary approval. Preliminary approval is based on formal review of a subsequent performance test on the same unit as specified by Minn. R. 7017.2025, subp. 3. The limit is final upon issuance of a permit amendment incorporating the change.	Minn. R. 7017.2025, subp. 3
MONITORING REQUIREMENTS	hdr
Monitoring Equipment Calibration: Annually calibrate all required monitoring equipment (any requirements applying to continuous emission monitors are listed separately in this permit).	Minn. R. 7007.0800, subp. 4(D)
Operation of Monitoring Equipment: Unless otherwise noted in Tables A, B, and/or C, monitoring a process or control equipment connected to that process is not necessary during periods when the process is shutdown, or during checks of the monitoring systems, such as calibration checks and zero and span adjustments. If monitoring records are required, they should reflect any such periods of process shutdown or checks of the monitoring system.	Minn. R. 7007.0800, subp. 4(D)
MODELING REQUIREMENTS	hdr
Re-modeling Protocol for PM10: due with a moderate or major amendment application for a PM10 increase. This protocol will describe the proposed modeling methodology and input data, clearly identifying any changes from the original modeling protocol and air emissions risk analysis. If no changes have been made, the protocol may consist solely of the statement "no changes have been made". If the changes being proposed would minimally impact the air emissions risk analysis and modeling results, justification can be provided for why re-modeling is not needed. This is a state only requirement and is not enforceable by the EPA Administrator and citizens under the Clean Air Act.	Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
RECORDKEEPING	hdr
Recordkeeping: Retain all records at the stationary source for a period of five (5) years from the date of monitoring, sample, measurement, or report. Records which must be retained at this location include all calibration and maintenance records, all original recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Records must conform to the requirements listed in Minn. R. 7007.0800, subp. 5(A).	Minn. R. 7007.0800, subp. 5(C)
Recordkeeping: Maintain records describing any insignificant modifications (as required by Minn. R. 7007.1250, subp. 3) or changes contravening permit terms (as required by Minn. R. 7007.1350, subp. 2), including records of the emissions resulting from those changes.	Minn. R. 7007.0800, subp. 5(B)
When the Permittee determines that no permit amendment or notification is required prior to making a change, the Permittee must retain records of all calculations required under Minn. R. 7007.1200. For expiring permits, these records shall be kept for a period of five years from the date the change was made or until permit reissuance, whichever is longer. For nonexpiring permits, these records shall be kept for a period of five years from the date that the change was made. The records shall be kept at the stationary source for the current calendar year of operation and may be kept at the stationary source or office of the stationary source for all other years. The records may be maintained in either electronic or paper format.	Minn. R. 7007.1200, subp. 4
REPORTING/SUBMITTALS	hdr

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Shutdown Notifications: Notify the Commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, notification shall be made to the Commissioner as soon as possible after the shutdown. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 3. At the time of notification, the owner or operator shall inform the Commissioner of the cause of the shutdown and the estimated duration. The owner or operator shall notify the Commissioner when the shutdown is over.	Minn. R. 7019.1000, subp. 3
Breakdown Notifications: Notify the Commissioner within 24 hours of a breakdown of more than one hour duration of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour time period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required in the circumstances outlined in Items A, B and C of Minn. R. 7019.1000, subp. 2. At the time of notification or as soon as possible thereafter, the owner or operator shall inform the Commissioner of the cause of the breakdown and the estimated duration. The owner or operator shall notify the Commissioner when the breakdown is over.	Minn. R. 7019.1000, subp. 2
Notification of Deviations Endangering Human Health or the Environment: As soon as possible after discovery, notify the Commissioner or the state duty officer, either orally or by facsimile, of any deviation from permit conditions which could endanger human health or the environment.	Minn. R. 7019.1000, subp. 1
Notification of Deviations Endangering Human Health or the Environment Report: Within 2 working days of discovery, notify the Commissioner in writing of any deviation from permit conditions which could endanger human health or the environment. Include the following information in this written description: 1. the cause of the deviation; 2. the exact dates of the period of the deviation, if the deviation has been corrected; 3. whether or not the deviation has been corrected; 4. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and 5. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.	Minn. R. 7019.1000, subp. 1
Application for Permit Amendment: If a permit amendment is needed, submit an application in accordance with the requirements of Minn. R. 7007.1150 through Minn. R. 7007.1500. Submittal dates vary, depending on the type of amendment needed.	Minn. R. 7007.1150 through Minn. R. 7007.1500
Extension Requests: The Permittee may apply for an Administrative Amendment to extend a deadline in a permit by no more than 120 days, provided the proposed deadline extension meets the requirements of Minn. R. 7007.1400, subp. 1(H).	Minn. R. 7007.1400, subp. 1(H)
Emission Inventory Report: due on or before April 1 of each calendar year following permit issuance. The Permittee shall submit this on a form approved by the Commissioner.	Minn. R. 7019.3000 through Minn. R. 7019.3100
Emission Fees: due 60 days after receipt of an MPCA bill.	Minn. R. 7002.0005 through Minn. R. 7002.0095

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Subject Item: **GP 001 Equipment Subject to 40 CFR pt. 63, subp. GGGG**

Associated Items: EU 003 DTDC Dryer Deck 2 / Cyclone

EU 013 DTDC Dryer Deck 1 / Cyclone

EU 014 DTDC Cooler Deck / Cyclone

EU 018 Mineral Oil Scrubber

FS 001 Extraction Process Equipment Leaks

TK 001 Hexane Storage Tank

TK 002 Hexane Storage Tank

What to do	Why to do it
LIMITS TO AVOID NEW SOURCE REVIEW	hdr
Alternative Operating Scenario. This permit contains limits on the emissions of GP 001 to enable the extraction plant to avoid classification as a major stationary source under New Source Review. These limits are written as two Alternative Operating Scenarios (AOS). The Permittee must comply with either Scenario 1 or Scenario 2 at all times including initial and subsequent start-up, shutdown, and malfunction. These records and calculations must be available and completed at all times (for either Scenario 1 or 2). If the records for one Scenario are not available, the Permittee must comply with the other Scenario.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11
Alternative Operating Scenario Recordkeeping. The Permittee shall keep a log showing which scenario it is operating under at all times. The log shall be updated contemporaneously when making a change from one operating scenario to another. The log shall at a minimum include the actual day the switch was made and the number of the operating scenario.	Minn. R. 7007.0800, subp. 11
Scenario 1	hdr
Volatile Organic Compounds: greater than or equal to 200 parts per million meal VOC content by weight AND a Solvent Loss Factor of 0.25 gal VOC/ton of canola oilseed processed. These are both 12-month rolling averages calculated by the end of each calendar month for the previous 12 months using the records and formulas specified in this permit for GP 001. All vegetable oil production equipment at the Facility is subject to this limit. If the Permittee replaces any equipment listed in GP 001, adds similar equipment, or modifies the listed equipment, such equipment is subject to this limit as well as all of the requirements of GP 001. Prior to making such a change, the Permittee shall apply for & obtain the appropriate permit amendment, as applicable.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11
VOC Limit continued: The Permittee is not required to repeat VOC calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.	CONTINUED: Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11
Capacity: less than or equal to 1000 tons/day using 365-day Rolling Average of canola oilseed. By the end of each day, calculate the canola oilseed rolling average for the previous 365 days.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11
Scenario 2	hdr
Volatile Organic Compounds: less than or equal to 214 tons/year using 12-month Rolling Sum to be calculated by the 15th day of each month for the previous 12 calendar months as described later in this permit. All vegetable oil production equipment at the Facility is subject to this limit. If the Permittee replaces any equipment listed in GP 001, adds similar equipment, or modifies the listed equipment, such equipment is subject to this limit as well as all of the requirements of GP 001. Prior to making such a change, the Permittee shall apply for & obtain the appropriate permit amendment, as applicable. The Permittee is not required to repeat VOC calculations described in Minn. R. 7007.1200, subp. 2. A permit amendment will still be needed regardless of the emissions increase if the change will be subject to a new applicable requirement or requires revisions to the limits or monitoring and recordkeeping in this permit.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11

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VOC Limit for First 11-months: For the first 11 calendar months after permit issuance, the Permittee shall comply with the applicable cumulative limit as of the specified month (e.g., at end of month 6, emissions must have been less than or equal to 170 tons for the previous 6 months): Month 1: 100 tons Month 2: 130 tons Month 3: 140 tons Month 4: 150 tons Month 5: 160 tons Month 6: 170 tons Month 7: 180 tons Month 8: 190 tons Month 9: 195 tons Month 10:205 tons Month 11: 210 tons For the first 11 months after permit issuance, all 12-month rolling sum calculations described elsewhere in this permit shall be modified to calculate the cumulative emissions for the months since permit issuance up through month 11. This is to be done for by end of each month of the first 11 months.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 11
MONITORING APPLICABLE TO BOTH SCENARIOS	hdr
Daily Recordkeeping. On each day of operation, the Permittee shall record and maintain the total quantity of oilseed processed at the facility for the previous day, in tons. This daily quantity shall than be input, daily, into the 365-day rolling sum of canola oilseed. On each day of operation, the Permittee shall record and maintain the total quantity of meal shipped from the facility on the previous day. The record shall include a lot identifier for each lot (e.g., a unique way to identify each lot shipped to correlate it to the meal VOC content data).	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5
Meal VOC Content: The Permittee shall determine the meal VOC content for each lot of meal by collecting a representative sample and having it analyzed by a laboratory. The meal sampling will be done by the following method: Daily samples will be collected from the discharge of the meal grinder. All daily samples will be of the same size. For each week, the daily samples will be combined into one composite sample. A one-half pound section of the composite sample will be sent to a laboratory for analysis and will be identified with a date stamp. The meal from the weekly period will be sent to the laboratory the following week and will have a date of one week later. The record shall identify the lot of meal and shall include the content specified in both parts per million (ppm) and pounds per ton (lb/ton). Only the individual components of the VOC content that are analyzed shall be taken into account. The Permittee shall keep records of all analyses on-site.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5
Monthly Recordkeeping of Solvent Loss Factor: By the 15th day of each month, the Permittee shall calculate and record the following for the previous calendar month: 1) the total actual VOC loss, in gallons, using Equation 2A in Appendix A of this permit, but for total VOC (not just hexane); 2) the total monthly canola oilseed processed, in tons, using Equation 5A in Appendix A of this permit; and 3) the monthly Solvent Loss Factor, in gallons VOC/ton of canola oilseed processed, by dividing the number from item 1 by the number from item 2.	Title I Condition: To avoid classification as major source and modification under 40 CFR Section 52.21 & Minn. R. 7007.3000; Minn. R. 7007.0800, subps. 4 and 5
MONITORING FOR SCENARIO 1	hdr
Monthly Recordkeeping -- 12-month rolling average calculations. By the fifteenth day of the month, the Permittee shall calculate and record the following: 1) The amount of meal shipped in each lot during the previous calendar month using the daily usage records. This record shall also include the meal VOC content in ppm for each lot as determined by the requirements of this permit; 2) The average meal VOC content in ppm for the previous month using the formulas specified in this permit; 3) The 12-month rolling average meal VOC content for the previous 12-month period by summing the average monthly meal VOC content numbers for the previous 12 months and dividing by 12; and 4) The 12-month rolling average solvent loss factor for the previous 12-month period by summing the monthly solvent loss factors for the previous 12 months and dividing by 12.	Minn. R. 7007.0800, subps. 4 and 5

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Monthly Recordkeeping -- Average Monthly Meal VOC Content. The Permittee shall calculate the monthly meal VOC content using the following equations: Average Meal VOC Content (ppm) = X / Y X = (M1 x C1) + (M2 x C2) + (M3 x C3) + ... Y = M1 + M2 + M3.... where: M# = amount meal shipped in each lot during the calendar month, in tons. C# = the meal VOC content in lot M#, in ppm	Minn. R. 7007.0800, subps. 4 and 5
MONITORING FOR SCENARIO 2	hdr
Monthly Recordkeeping -- VOC Emissions. By the fifteenth day of the month, the Permittee shall calculate and record the following: 1) The VOC emissions for the previous month using the formulas specified in this permit; and 2) The 12-month rolling sum VOC emissions for the previous 12-month period by summing the monthly VOC emissions data for the previous 12 months.	Minn. R. 7007.0800, subps. 4 and 5
Monthly Calculation -- VOC Emissions. The Permittee shall calculate VOC emissions using the following equations: VOC (tons/month) = C - M C = Slf x S x D M = (E1 x F1) + (E2 x F2) + (E3 x F3) + ... where: VOC = total VOC emitted in tons/month; C = total VOC, in tons/month, lost from the canola extraction process Slf = the Solvent Loss Factor for the month, in gallons/ton, determined as required earlier in this permit; S = total canola oilseed processed for the month, in tons/month, determined as required earlier in this permit; D = density of the applicable VOC, in lb/gallon; M = amount of VOC, in tons/month, that is shipped off-site as bound in the meal; E# = amount, in tons/month, of meal shipped in lot #. F# = VOC content in E#, in lb VOC/ton of meal, determined as required earlier in this permit. Only the individual components of the VOC content that are analyzed shall be taken into account.	Minn. R. 7007.0800, subps. 4 and 5
NESHAP REQUIREMENTS	hdr
The Permittee shall comply with the applicable provisions below based on 40 CFR pt. 63, subp. GGGG, Solvent Extraction for Vegetable Oil Production upon startup of any unit in GP 001.	40 CFR pt. 63, subp. GGGG; Minn. R. 7011.7840
This permit is written assuming that the Permittee will use the compliance ratio option instead of the low-HAP solvent option. However, the Permittee may change compliance options by submitting a notice to the MPCA at least 60 days prior to changing compliance options. If the Permittee later changes from the low-HAP solvent option to the compliance ratio determination option, the Permittee must determine the compliance ratio for the most recent 12 operating months beginning with the first month after changing compliance options.	40 CFR Section 63.2840(f); Minn. R. 7011.7840
EMISSION LIMITS	hdr
Compliance Ratio: less than or equal to 1.00 for the previous operating month determined using the procedures specified in this permit for GP 001 and the formulas in Appendix A of this permit.	40 CFR Section 63.2840(a); Minn. R. 7011.7840
COMPLIANCE REQUIREMENTS	hdr
Within 15 days of the startup date of any unit in GP 001, the Permittee must choose to comply with one of the following options: 1) Normal operation. Upon startup of any unit in GP 001, the Permittee must meet all of the requirements listed in 40 CFR Section 63.2850(a) and Table 1 of 40 CFR Section 63.2850 for sources under normal operation, and the schedules for demonstrating compliance for new sources under normal operation in Table 2 of 40 CFR Section 63.2850.	40 CFR Section 63.2850(c); Minn. R. 7011.7840

continued 2) Initial startup period. For up to 6 calendar months after the startup date of any unit GP 001, the Permittee must meet all of the requirements listed in 40 CFR Section 63.2850(a) and Table 1 of 40 CFR Section 63.2850 for sources operating under an initial startup period, and the schedules for demonstrating compliance for new sources operating under an initial startup period in Table 2 of 40 CFR Section 63.2850. After a maximum of 6 calendar months, GP 001 must then meet all of the requirements listed in Table 1 of 40 CFR Section 63.2850 for sources under normal operation.	CONTINUED: 40 CFR Section 63.2850(c); Minn. R. 7011.7840
A malfunction is defined in 40 CFR Section 63.2. If the affected facility experiences an unscheduled shutdown as a result of a malfunction, continues to operate during a malfunction (including the period reasonably necessary to correct the malfunction), or starts up after a shutdown resulting from a malfunction, then the Permittee must meet the requirements associated with one of two compliance options. Routine or scheduled process startups and shutdowns resulting from, but not limited to, market demands, maintenance activities, and switching types of oilseed processed, are not startups or shutdowns resulting from a malfunction and, therefore, do not qualify for this provision. Within 15 days of the beginning date of the malfunction, the Permittee must choose to comply with one of the options listed in 40 CFR Section 63.2850(e)(1) or (2).	40 CFR Section 63.2850(e); Minn. R. 7011.7840
GENERAL CALCULATIONS	hdr
Compliance Ratio Calculation: By the end of each calendar month following an operating month, the Permittee shall calculate the compliance ratio for the previous 12 operating months. The first compliance ratio will be determined following the first 12 operating months after initial startup. When calculating the compliance ratio, consider the conditions and exclusions in 40 CFR Section 63.2840(b)(1) through (5). An operating month is any calendar month with at least one normal operating period. It does not include the initial startup period or malfunction period. A normal operating period is defined in 40 CFR Section 63.2872.	40 CFR Section 63.2840; Minn. R. 7011.7840
Actual Solvent Loss Calculation: By the end of each calendar month following an operating month, the Permittee shall determine the total solvent loss, in gallons, for the previous operating month. The Permittee shall determine the actual solvent loss occurring from GP 001 for all normal operating periods recorded within a calendar month as specified in Appendix A of this permit. The total solvent loss for an operating month includes all solvent losses that occur during normal operating periods within the operating month.	40 CFR Section 63.2853; Minn. R. 7011.7840
Actual Solvent Loss 12-month Rolling Sum Calculation: If the Permittee determined solvent losses for 12 or more operating months, then the Permittee must also determine the 12 operating months rolling sum of actual solvent loss in gallons by summing the monthly actual solvent loss for the previous 12 operating months. This shall be calculated by the end of each calendar month. The 12 operating months rolling sum of solvent loss is the "actual solvent loss", which is used to calculate the compliance ratio as described in 40 CFR Section 63.2840.	CONTINUED: 40 CFR Section 63.2853; Minn. R. 7011.7840
Changes in solvent working capacity. In records kept on-site, the Permittee shall document any process modifications resulting in changes to the solvent working capacity in the vegetable oil production process. Solvent working capacity is defined in 40 CFR Section 63.2872. If the change occurs during a normal operating period, the Permittee must determine the difference in working solvent volume and make a one-time documented adjustment to the solvent inventory.	40 CFR Section 63.2853(a)(5)(ii); Minn. R. 7011.7840
Monthly Weighted Average HAP Content Calculation: By the end of each calendar month, following an operating month, the Permittee shall calculate the monthly weighted average HAP content (volume fraction) as specified in Appendix A of this permit and using the data as required by 40 CFR Section 63.2854(b).	40 CFR Section 63.2854; Minn. R. 7011.7840
12-Month Rolling Sum Calculation of Weighted Average of HAP Content of Solvent Received: If the Permittee determined the monthly weighted average volume fraction of HAP in solvent received for 12 or more operating months, then the Permittee must also determine the 12 operating months rolling sum of weighted average volume fraction of HAP in solvent received by summing the monthly weighted average volume fraction of HAP in solvent received for the previous 12 operating months. This shall be calculated by the end of each calendar month. The 12 operating months rolling sum of weighted average volume fraction of HAP in solvent received is used to calculate the compliance ratio as described in 40 CFR Section 63.2840.	40 CFR Section 63.2854; Minn. R. 7011.7840
Oilseed Quantity Processed: By the end of each calendar month, following an operating month, the Permittee shall calculate the tons of each oilseed processed at the facility as specified in Appendix A of this permit and using the data as required by 40 CFR Section 63.2855(a) and (b).	40 CFR Section 63.2855; Minn. R. 7011.7840

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12-Month Rolling Sum Calculation of Oilseed Quantity Processed: If the Permittee determined the monthly quantity of oilseed processed for 12 or more operating months, then the Permittee must also determine the 12 operating months rolling sum of quantity of oilseed processed by summing the monthly quantity of oilseed processed for the previous 12 operating months. This shall be calculated by the end of each calendar month. The 12 operating months rolling sum of quantity of oilseed processed is used to calculate the compliance ratio as described in 40 CFR Section 63.2840.	CONTINUED: 40 CFR Section 63.2855; Minn. R. 7011.7840
RECORDKEEPING REQUIREMENTS	hdr
Start-up, Shutdown and Malfunction (SSM) Plan: The Permittee shall develop and implement a written SSM plan. The SSM plan must provide detailed procedures for operating and maintaining the source to minimize emissions during a qualifying SSM event for which the source chooses the 40 CFR Section 63.2850(e)(2) malfunction period. The SSM Plan, including associated control and monitoring equipment, shall be prepared in accordance with 40 CFR Section 63.6(e)(3) and include requirements specified therein. The SSM Plan must be located at the plant site and must be kept updated. When the SSM Plan is updated, the Permittee must keep all previous versions of the SSM Plan for a period of 5 years. The Permittee must submit the SSM Plan when required.	40 CFR Sections 63.2852 and 63.2862(b); Minn. R. 7011.7840
continued: The SSM plan must specify a program of corrective action for malfunctioning process and air pollution control equipment and reflect the best practices now in use by the industry to minimize emissions. Some or all of the procedures may come from plans developed for other purposes such as a Standard Operating Procedure manual or an Occupational Safety and Health Administration Process Safety Management plan. To qualify as a SSM plan, other such plans must meet all the applicable requirements of the NESHAP.	CONTINUED: 40 CFR Sections 63.2852 and 63.2862(b); Minn. R. 7011.7840
Plan for Demonstrating Compliance: The Permittee shall develop and implement a written Plan for Demonstrating Compliance. The Plan must include the following: (1) The name and address of the owner or operator; (2) The physical address of the vegetable oil production process; (3) A detailed description of all methods of measurement the Permittee will use to determine solvent losses, HAP content of solvent, and the tons of each type of oilseed processed; (4) When each measurement will be made; and (5) Examples of each calculation used to determine the compliance status. Include examples of how to convert data measured with one parameter to other terms for use in compliance determination. This plan is incorporated into this permit by reference. (6) Example logs of how data will be recorded; (7) A plan to ensure that the data continue to meet compliance demonstration needs.	40 CFR Section 63.2851(a); Minn. R. 7011.7840
Plan Revisions for Demonstrating Compliance: The agency may require the Permittee to revise your Plan for demonstrating compliance. The Agency may require reasonable revisions if the procedures lack detail, are inconsistent or do not accurately determine solvent loss, HAP content of the solvent, or the tons of oilseed processed.	40 CFR Sections 63.2851(b) and 63.2862(b); Minn. R. 7011.7840
Recordkeeping of Compliance Plans: The Permittee must complete the plan for demonstrating compliance and the SSM plan before compliance date (startup of any unit in GP 001) and keep them on-site and readily available as long as the source is operational.	40 CFR Section 63.2862(b); Minn. R. 7011.7840

Recording- Solvent Inventory: By the end of each calendar month following an operating month, the Permittee shall record the following information for the previous operating month (in accordance with the Plan for Demonstrating Compliance). At a minimum, these records must include: 1. Dates that define each operating status period during a calendar month; 2. The operating status of your source such as normal operation, nonoperating, malfunction period, or exempt operation for each recorded time interval; 3. The gallons of extraction solvent in the inventory on the beginning and ending dates of each normal operating period; 4. The gallons for all extraction solvent received, purchased, and recovered during each calendar month; 5. All extraction solvent inventory adjustments, additions, or subtractions. The Permittee must document the reason for the adjustment and justify the quantity of the adjustment;	40 CFR Section 63.2862(c)(1); Minn. R. 7011.7840
continued: 6. The total solvent loss for each calendar month, regardless of the source operating status, and 7. The actual solvent loss in gallons for each operating month.	CONTINUED: 40 CFR Section 63.2862(c)(1); Minn. R. 7011.7840
Recording - Average HAP Content: By the end of each calendar month following an operating month, the Permittee shall record the following information for the average HAP content in the extraction solvent, for the previous operating month: 1. The gallons of extraction solvent received in each delivery; 2. The volume fraction of each HAP exceeding 1 percent by volume in each delivery of extraction solvent, and 3. The weighted average volume fraction of HAP in extraction solvent received since the end of the last operating month as determined in 40 CFR Section 63.2854(b)(2).	40 CFR Section 63.2862(c)(2); Minn. R. 7011.7840
Recording - Oilseed Processed Weight: For each type of listed oilseed processed, the Permittee shall at a minimum record the following (in accordance with the Plan for Demonstrating Compliance): 1. The dates that define each operating status period. These dates must be the same as the dates entered for the extraction solvent inventory; 2. The operating status of the source such as normal operation, nonoperating, malfunction period, or exempt operating for each recorded time interval. On the log for each type of listed oilseed that is not being processed during a normal operating period, the Permittee must record which type of listed oilseed is being processed in addition to the source operating status; 3. The oilseed inventory for the type of listed oilseed that is being processed during a normal operating period, the Permittee must record which type of listed oilseed is being processed in addition to the source operating status;	40 CFR Section 63.2862(c)(3); Minn. R. 7011.7840
continued: 4. The tons of each type of listed oilseed received at the affected source each normal operating period; 5. All listed oilseed inventory adjustments, additions, or subtractions for normal operating periods. The Permittee must document the reason for the adjustment and justify the quantity of the adjustment; and 6. The tons of each type of listed oilseed processed during each operating month.	CONTINUED: 40 CFR Section 63.2862(c)(3); Minn. R. 7011.7840

After the facility source has processed listed oilseed for 12 operating months and the facility is not operating during an initial start-up as described in 40 CFR Section 63.2850(c)(2) or (d)(2), or a malfunction period as described in 40 CFR Section 63.2850(e)(2), the Permittee must record the following by the end of the calendar month following each operating month: 1. Recordkeeping of actual solvent: the 12 operating months rolling sum of the actual solvent loss in gallons (as described in 40 CFR Section 63.2853(c)); 2. Recordkeeping of fraction of HAP: the weighted average volume fraction of HAP in extraction solvent received for the previous 12 operating months (as described in 40 CFR Section 63.2854(b)(3)); 3. Recordkeeping of oilseed processed: the 12 operating months rolling sum of each type of listed oilseed processed in tons (as described in 40 CFR Section 63.2855(c));	40 CFR Section 63.2862(d); Minn. R. 7011.7840
continued: 4. Recordkeeping for compliance ratio: the compliance ratio for each 12 month operating period (as required in Appendix A of this permit); and 5. Recordkeeping of compliance status: a statement of whether the source is in compliance with all of the requirements of 40 CFR pt. 63, subp. GGGG. This includes a determination of whether the Permittee has met all of the applicable requirements in 40 CFR Section 63.2850.	CONTINUED: 40 CFR Section 63.2862(d); Minn. R. 7011.7840
Recordkeeping of each SSM event: For each SSM event subject to a malfunction period, the Permittee must record the following by the end of the calendar month following each month in which a malfunction period occurred: 1. A description and date of the SSM event, its duration, and reason it qualifies as a malfunction; 2. An estimate of the solvent loss in gallons for the duration of the malfunction period with supporting document; and 3. A checklist or other mechanism to indicate whether the SSM plan was followed during the malfunction period.	40 CFR Section 63.2862(e); Minn. R. 7011.7840
Recordkeeping: The Permittee's records shall: (a) be in a form suitable and readily available for review in accordance with 40 CFR Section 63.10(b)(1); (b) as specified in 40 CFR Section 63.10(b)(1), be kept for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.	40 CFR Section 63.2863; Minn. R. 7011.7840
REPORTING REQUIREMENTS	hdr
Significant modification notifications. If the Permittee plans to undergo a significant modification as defined in 40 CFR Section 63.2872, the Permittee must submit the two reports as described in 40 CFR Section 63.2860(c)(1) and (2).	40 CFR Sections 63.2860(c); Minn. R. 7011.7840
Content of Notification of compliance status: In addition to the information specified in 40 CFR Section 63.9(h), the notification shall include: 1. The name and address of the owner or operator; 2. The physical address of the vegetable oil production process; 3. Each listed oilseed type processed during the 12 calendar months period covered by the report; 4. Each HAP identified under 40 CFR Section 63.2854(a) as being present in concentrations greater that 1 percent by volume in each delivery of solvent received during the 12 calendar months period covered by the report; 5. A statement designating the source as a major source of HAP or a demonstration the source qualifies as an area source; and	40 CFR Sections 63.9(h) and 63.2860(d); Minn. R. 7011.7840; Minn. R. 7019.0100, subp. 2(A)
continued: 6. A compliance certification to indicate whether the source was in compliance for each compliance determination made during the 12 calendar months period covered by the report. For each compliance determination, you must include a certificate that the procedures in the Plan for demonstrating compliance are being followed and compliance ration is less than or equal to 1.00.	CONTINUED: 40 CFR Sections 63.9(h) and 63.2860(d); Minn. R. 7011.7840; Minn. R. 7019.0100, subp. 2(A)

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Annual Compliance Certification: The Compliance Certification listed in Table B of this permit shall include the following: (1) The name and address of the owner or operator; (2) The physical address of the vegetable oil production process; (3) Each listed oilseed type processed during the 12 calendar months period covered by the report. (4) Each HAP identified under 40 CFR Section 63.2854(a) as being present in concentrations greater than 1 percent by volume in each delivery of solvent received during the 12 calendar months period covered by the report;	40 CFR Section 63.2861(a); Minn. R. 7011.7840
continued: (5) A statement designating the source as a major source of HAP or a demonstration that the source qualifies as an area source. An area source is a source that is not a major source and is not collocated within a plant site with other sources that are individually or collectively a major source; and (6) A compliance certification to indicate whether the source was in compliance for each compliance determination made during the 12 calendar months period covered by the report. For each such compliance determination, the Permittee must include a certification of the following: (i) that Permittee is following the procedures described in the plan for demonstrating compliance; and (ii) The compliance ratio is less than or equal to 1.00.	CONTINUED: 40 CFR Section 63.2861(a); Minn. R. 7011.7840
Notification of Deviation Report: The Permittee shall submit a deviation notification for each operating month in which the compliance ratio exceeds 1.00. The report must be submitted by the end of the month following the calendar month in which the deviation occurred. This report must include: (1) The name and address of the owner or operator; (2) The physical address of the vegetable oil production process; (3) Each listed oilseed type processed during the 12 operating months period for which you determined the deviation; and (4) The compliance ratio comprising the deviation. The Permittee may reduce the frequency of submittal of the deviation notification report if the Agency does not object as provided in 40 CFR Section 63.10(e)(3)(iii).	40 CFR Section 63.2861(b); Minn. R. 7011.7840
Periodic SSM Report: The Permittee shall submit by the end of the calendar month, a periodic startup, shutdown or malfunction (SSM) report for the previous month during which the source has been operated under an initial startup period or a malfunction period. The SSM report must include the following: 1. The name, title, and signature of the source's responsible official who is certifying that the report accurately states that all actions taken during the initial startup or malfunction period were consistent with the SSM plan; 2. A description of events occurring during the time period, the date and duration of the events, and reason the time interval qualifies as an initial startup or malfunction period; and 3. An estimate of the solvent loss during the initial startup or malfunction period with supporting documentation.	40 CFR Section 63.2861(c); Minn. R. 7011.7840
Immediate SSM Reports: Within 2 working days after commencing actions inconsistent with the SSM plan, the Permittee shall submit an immediate SSM report consisting of a telephone call or facsimile transmission followed by a letter within 7 working days of the event. The SSM report must include the following: 1. The name, title, and signature of the source's responsible official who is certifying the accuracy of the report, an explanation of the event, and the reasons for not following the SSM Plan; 2. A description and date of the SSM event, its duration, and reason it qualifies as a SSM; and 3. An estimate of the solvent loss for the duration of the SSM event with supporting documentation.	40 CFR Section 63.2861(d); Minn. R. 7011.7840

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Subject Item: **GP 002 Equipment Subject to 40 CFR pt. 63, subp. FFFF**

Associated Items: EU 019 Biodiesel Process Vent

EU 020 Biodiesel Loadout

EU 021 Flare

EU 022 Biodiesel Reactor 1

EU 023 Biodiesel Reactor 2

FS 003 Biodiesel Process Equipment Leaks

SV 010 Boidiesel Process Vent

TK 003 Methanol

What to do	Why to do it
GENERAL REQUIREMENTS	hdr
The Permittee shall comply with the applicable provisions of 40 CFR pt. 63, subp. FFFF, Miscellaneous Organic Chemical Manufacturing upon startup of any unit in GP 002. Miscellaneous organic chemical manufacturing process units (MCPU) includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in 40 CFR Section 63.2550, that satisfies all of the conditions specified in 40 CFR Section 63.2550(b)(1) through (3). An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in 40 CFR Section 63.2550(b)(1)(i) through (v).	40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.2435; Minn. R. 7011.8050
In addition to GP 002, requirements from 40 CFR pt. 63, subp. FFFF are listed in this permit at GP 007, EU 019, EU 021, TK 003, and FS 003.	40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.2435; Minn. R. 7011.8050
The Permittee shall comply with the emission limits and work practice standards in Tables 1 through 7 of 40 CFR pt. 63, subp. FFFF at all times, except during periods of startup, shutdown, and malfunction (SSM), and meet the requirements specified in 40 CFR Section 63.2455-63.2490, except as specified in 40 CFR Section 63.2450(b)-(s).	40 CFR Section 63.2450(a); 40 CFR Section 63.6(f)(1); Minn. R. 7011.8050
Operation and Maintenance Requirements: At all times, including periods of SSM, the Permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. During a period of startup, shutdown, or malfunction, this general duty to minimize emissions requires that the Permittee reduce emissions from the affected source to the greatest extent, which is consistent with safety and good air pollution control practices.	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.8050
CONTINUED: The general duty to minimize emissions during a period of startup, shutdown, or malfunction does not require the Permittee to achieve emission levels that would be required by the applicable standard at other times if this is not consistent with safety and good air pollution control practices, nor does it require the Permittee to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures (including the SSM plan), review of operation and maintenance records, and inspection of the source.	CONTINUED: 40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.8050
Malfunctions must be corrected as soon as practicable after their occurrence in accordance with the SSM plan. To the extent that an unexpected event arises during a startup, shutdown, or malfunction, the Permittee must comply by minimizing emissions during such a SSM event consistent with safety and good air pollution control practices.	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(1)(ii); Minn. R. 7011.8050

Startup, Shutdown, and Malfunction (SSM) Plan: Permittee shall develop and implement a written SSM plan that describes, in detail, procedures for operating and maintaining the source during periods of SSM, and a program of corrective action for malfunctioning process and air pollution control and monitoring equipment used to comply with the relevant standard. The SSM plan shall address the requirements of 40 CFR Section 63.6(e)(3)(i). The SSM plan is not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSM plan requirement is limited to control devices and is optional for other equipment.	40 CFR Sections 63.2540, 63.2525(j), and 63.6(e)(3)(i); Minn. R. 7011.8050
Permittee may satisfy the requirements of a SSM plan, by using the affected source's standard operating procedures (SOP) manual, or an Occupational Safety and Health Administration (OSHA) or other plan, provided the alternative plans meet all the requirements of 40 CFR Section 63.6(e) and are made available for inspection or submitted when requested by the Administrator.	40 CFR Sections 63.2540, 63.2525(j), and 63.6(e)(3)(vi); Minn. R. 7011.8050
Maintenance and Revisions of Startup, Shutdown, and Malfunction (SSM) Plan: Permittee shall maintain at the affected source a current SSM plan, must make the plan available upon request for inspection and copying by the Administrator, or submit a copy upon written request of the Administrator a required by 40 CFR Section 63.6(e)(3)(v).	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(v); Minn. R. 7011.8050
Based on the results of a determination made under 40 CFR Section 63.6(e)(1)(i), the Administrator may require that the Permittee of an affected source make changes to the SSM plan for that source for the reasons listed in 40 CFR Section 63.6(e)(3)(vii)(A) through (D).	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(vii); Minn. R. 7011.8050
The Permittee may periodically revise the SSM plan for the affected source as necessary to satisfy the requirements of this part or to reflect changes in equipment or procedures at the affected source. The Permittee may make such revisions to the SSM plan without prior approval by the Administrator or the permitting authority. However, each such revision to a SSM plan must be reported in the semiannual report required by 40 CFR Section 63.10(d)(5). If the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction but was not included in the SSM plan at the time the Permittee developed the plan, the Permittee must revise the SSM plan within 45 days after the event to include detailed procedures for operating and maintaining the source during similar malfunction events and a program of corrective action for similar malfunctions of process or air pollution control and monitoring equipment.	40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(viii); Minn. R. 7011.8050
CONTINUED: In the event that the Permittee makes any revision to the SSM plan which alters the scope of the activities at the source which are deemed to be a startup, shutdown, or malfunction, or otherwise modifies the applicability of any emission limit, work practice requirement, or other requirement in a standard established under this part, the revised plan shall not take effect until after the Permittee has provided a written notice describing the revision to the MPCA.	CONTINUED: 40 CFR Section 63.2540; 40 CFR Section 63.6(e)(3)(viii); Minn. R. 7011.8050
MAINTENANCE WASTEWATER REQUIREMENTS	hdr
The Permittee must meet each requirement in Table 7 of 40 CFR pt. 63, subp. FFFF that applies to the wastewater streams and liquid streams in open systems within an MCPU, except as specified in 40 CFR Section 63.2485(b) through (o).	40 CFR Section 63.2485(a); Minn. R. 7011.8050
Maintenance Wastewater Procedures Plan: The Permittee shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall: (1) Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities. (2) Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and (3) Specify the procedures to be followed when clearing materials from process equipment.	Table 7 of 40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.105(b); Minn. R. 7011.8050
The Permittee shall modify and update the information required by 40 CFR Section 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. The Permittee shall implement the procedures described in, and maintain a record of the information required by, 40 CFR Section 63.105(b) and (c) as part of the SSM plan required under 40 CFR Section 63.6(e)(3).	Table 7 of 40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.105(c) through (e); Minn. R. 7011.8050
SUBMITTALS	hdr

Content of Semiannual Compliance Report: The Permittee shall submit semiannual compliance reports that contain the following information: 1) Company name and address. 2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. 3) Date of report and beginning and ending dates of the reporting period. 4) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction. 5) The compliance report must contain the information on deviations, as defined in 40 CFR Section 63.2550, according to 40 CFR Section 63.2520(e)(5)(i)-(iii).	40 CFR Section 63.2520(e); Minn. R. 7011.8050
CONTINUED: 6) Include each new operating scenario which has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. A revised operating scenario for an existing process is considered to be a new operating scenario. 7) Applicable records and information for periodic reports as specified in referenced 40 CFR pt. 63, subps. F, G, SS, TT, UU, WW, and GGG.	CONTINUED: 40 CFR Section 63.2520(e); Minn. R. 7011.8050
CONTINUED: 8) Notification of process change. Except as specified below, whenever Permittee makes a process change, or change any of the information submitted in the notification of compliance status report, that is not within the scope of an existing operating scenario, the Permittee must document the change in compliance report. A process change does not include moving within a range of conditions identified in the standard batch. The notification must include all of the information in 40 CFR Section 63.2520(e)(10)(i)(A)-(C). The Permittee must submit a report 60 days before the scheduled implementation date of any of the changes identified 40 CFR Section 63.2520(e)(10)(ii)(A), (B), or (C).	CONTINUED: 40 CFR Section 63.2520(e); Minn. R. 7011.8050
Content of the Notification of compliance status report: The Permittee shall submit a notification of compliance status report containing the following information: i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP emissions from the affected source. ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to 40 CFR Section 63.2455 through 63.2485. iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish. iv) All operating scenarios. v) Descriptions of worst-case operating and/or testing conditions for control devices.	40 CFR Section 63.2520(d)(2); Minn. R. 7011.8050
CONTINUED: vi) Identification of parts of the affected source subject to overlapping requirements described in 40 CFR Section 63.2535 and the authority under which you will comply. vii) The information specified in 40 CFR Section 63.1039(a)(1)-(3) for each process subject to the work practice standards for equipment leaks in Table 6 of 40 CFR pt. 63, subp. FFFF.	CONTINUED: 40 CFR Section 63.2520(d)(2); Minn. R. 7011.8050
RECORDKEEPING REQUIREMENTS	hdr
Permittee must keep each applicable record required by 40 CFR pt. 63, subp. A and in referenced 40 CFR pt. 63, subps. F, G, SS, TT, UU, WW, and GGG.	40 CFR Section 63.2525(a); Minn. R. 7011.8050

Facility Name: Northstar Agri Industries - Hallock

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The Permittee shall keep records of each operating scenario as follows: 1) A description of the process and the type of process equipment used. 2) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in 40 CFR Section 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks. 3) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent. 4) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device. 5) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).	40 CFR Section 63.2525(b); Minn. R. 7011.8050
CONTINUED: 6) The applicable monitoring requirements of this subpart and any parametric level that assures compliance for all emissions routed to the control device or treatment process. 7) Calculations and engineering analyses required to demonstrate compliance. 8) For reporting purposes, a change to any of these elements not previously reported, except for 40 CFR Section 63.2525(b)(5), constitutes a new operating scenario.	CONTINUED: 40 CFR Section 63.2525(b); Minn. R. 7011.8050

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **GP 003 Equipment Subject to both 40 CFR pt. 60, subp. Dc and Case-by-Case MACT**

Associated Items: EU 001 Boiler 1

EU 002 Boiler 2

SV 007 Boiler 1 & 2

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
Carbon Monoxide: less than or equal to 400 parts per million by volume on a dry basis corrected to 3% oxygen (3-run average) while burning natural gas, propane, or distillate fuel oil. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Front-half Particulate Matter: less than or equal to 0.002 lbs/million Btu heat input while burning natural gas. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Front-half Particulate Matter: less than or equal to 0.007 lbs/million Btu heat input while burning propane. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Front-half Particulate Matter: less than or equal to 0.014 lbs/million Btu heat input while burning distillate fuel oil. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Mercury: less than or equal to 0.000003 lbs/million Btu heat input while burning natural gas or propane. This limit applies at all times except during period of startup, shutdown, or malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Mercury: less than or equal to 0.000006 lbs/million Btu heat input while burning distillate fuel oil. This limit applies at all times except during period of startup, shutdown, or malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a)
Opacity: less than or equal to 20 percent opacity using 6-minute Average , except for one 6-minute period per hour of not more than 27 precent opacity. This limit applies at all times that distillate oil is being combusted, except during periods of startup, shutdown, and malfunction. This limit applies individually to each unit listed at GP003.	40 CFR Section 60.43c(c); 40 CFR Section 60.43c(d); Minn. R. 7011.0570
Sulfur Content of Fuel: less than or equal to 0.5 percent by weight for distillate oil. The percent reduction requirements of 40 CFR Section 60.42c are not applicable. Compliance with the fuel oil sulfur limit may be determined based on a certification from the fuel supplier, as described under 40 CFR Section 60.48c(f). The fuel oil sulfur limit applies at all times, including periods of startup, shutdown, and malfunction.	40 CFR Section 60.42c(d); 40 CFR Section 60.42c(h)(1); 40 CFR Section 60.42(c)(i); Minn. R. 7011.0570
Fuel type: distillate oil, natural gas and propane only, by design.	Minn. R. 7005.0100, subp. 35a
Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.	40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000
MONITORING AND RECORDKEEPING REQUIREMENTS	hdr
The Permittee shall keep obtain and maintain records of fuel supplier certification of each shipment of distillate oil. The certification shall include the following information: a) the name of the oil supplier b) a statement from the oil supplier that the oil complies with the specifications under the definition of 40 CFR Section 60.41c c) the sulfur content of the oil	40 CFR Section 60.48c(e) and (f); 40 CFR Section 63.55(a); Minn. R. 7011.0570
The Permittee shall record and maintain records of the fuels combusted during each calendar month.	40 CFR Section 60.48c(g)(1); Minn. R. 7011.0570
REPORTING REQUIREMENTS	hdr

Facility Name: Northstar Agri Industries - Hallock

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The Permittee shall submit submit a report to the Administrator every six months. All reports shall be postmarked by the 30th day following the end of the reporting period. The report shall include the following information: (1) Calendar dates covered in the reporting period (2) Copies of the fuel supplier certifications for the reporting period (3) A certified statement signed by the owner or operator that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.	40 CFR Section 60.48c(d), (e), and (j); Minn. R. 7011.0570
TESTING REQUIREMENTS	hdr
Initial Performance Test: due 180 days after Initial Startup of each boiler using distillate oil, to measure opacity emissions from each boiler. The Initial Startup date refers to the first time distillate oil is combusted.	40 CFR Section 60.8; 40 CFR Section 60.45c(a)(8); Minn. R. 7011.0570
Malfunctions shall be corrected as soon as practicable after their occurrence.	40 CFR Section 63.6(e)(l)(ii); Minn. R. 7011.7000
NESHAP COMPLIANCE DEMONSTRATION	hdr
The Permittee shall comply with the Front Half Particulate Matter limits and the Mercury limits by certifying that only the allowed fuels are used. The allowable fuels are distillate fuel oil with a sulfur content <0.5% (NSPS certification may be used) or pipeline quality natural gas and propane.	40 CFR Section 63.55(a)
Initial Performance Test: due 180 days after Initial Startup of each boiler while burning natural gas to measure Carbon Monoxide emissions. The Initial Startup date is the first date that natural gas is burned in each boiler.	40 CFR Section 63.7(a)(2); 40 CFR Section 63.55(a); Minn. R. 7011.7000; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup of each boiler while burning propane to measure Carbon Monoxide Emissions. The Initial Startup date is the first date that propane is burned in each boiler.	40 CFR Section 63.7(a)(2); 40 CFR Section 63.55(a); Minn. R. 7011.7000; Minn. R. 7011.2020, subp. 1
Initial Performance Test: due 180 days after Initial Startup of each boiler while burning distillate oil to measure Carbon Monoxide Emissions. The Initial Startup date is the first date that distillate oil is burned in each boiler.	40 CFR Section 63.7(a)(2); 40 CFR Section 63.55(a); Minn. R. 7011.7000; Minn. R. 7017.2000, subp. 1
Performance Test Procedures: The Permittee shall conduct all performance tests in accordance with 40 CFR Section 63.7(c), (d), (e), (f), and (h), as applicable, and MInn. R. ch. 7017.	40 CFR Section 63.7(c), (d), (e), (f), and (h); Minn. R. 7011.7000
Performance Test Report: The results of the performance test shall be submitted as part of the notification of the compliance status required under 40 CFR Section 63.9(h). For performance tests, the Permittee shall follow the data analysis, recordkeeping, and reporting requirements in 40 CFR Section 63.7(g).	40 CFR Section 63.7(g) and 63.10(d)(2); Minn. R. 7017.2035, subp. 2; Minn. R. 7011.7000
NESHAP RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: The Permittee shall maintain files of all information required by this part in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.	40 CFR Section 63.10(b)(1); Minn. R. 7011.7000
The Permittee shall maintain, at a minimum, the following information in the files: 1) the occurrence and duration of each startup, shutdown, or malfunction of operation; 2) all required measurements needed to demonstrate compliance with a relevant standard; 3) all results of performance test; 4) all measurements as may be necessary to determine the conditions of performance tests and performance evaluations; 5) any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements under this part; 6) all documents supporting initial notifications and notifications of compliance status.	40 CFR Section 63.10(b)(2); Minn. R. 7011.7000
Any change in the information already provided under 40 CFR Section 63.9 shall be provided in writing within 15 calendar days after the change.	40 CFR Section 63.9(j); Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **GP 004 Equipment Vented to or Including Fabric Filters**

Associated Items: CE 001 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 002 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

CE 003 Fabric Filter - Low Temperature, i.e., T<180 Degrees F

EU 007 Canola Seed Receiving

EU 008 Seed Cleaner & Aspirator

EU 015 Meal Grinder / Baghouse

EU 017 Meal & Pellet Storage & Loadout

SV 001 Seed Cleaner & Aspirator

SV 002 Flaker, Meal Grinder and Pellet Cooler

SV 005 Canola Seed Receiving

SV 008 Meal & Pellet Storage & Loadout

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.010 grains/dry standard cubic foot using 1-Hour Average . This limit applies individually to each unit listed in GP004.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.010 grains/dry standard cubic foot using 1-Hour Average . This limit applies individually to each unit listed in GP004.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Total Enclosure Requirement. All controls listed in GP 004 must have capture systems that meet the definition of total enclosure in Minn. R. 7011.0060. If the emission unit vented to the CE does not have a total enclosure per this definition, then the emission unit must operate inside a building that serves as a total enclosure by meeting the following requirements: 1) the building must be under negative pressure; 2) all air vented from the building shall be sent through air pollution control equipment meeting the requirements of GP 004; and 3) each door and window (i.e., opening) in the building shall be kept closed when any unit vented to the fabric filter is in operation. In particular, for the receiving/loadout building for oilseed and meal trucks during the entire oilseed receiving and meal loadout.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
CAPTURE RECORDKEEPING	hdr
Signage and Inspection of Building Openings: For emission units in GP 004 that are vented to a fabric filter (CE) and that comply with the Total Enclosure Requirement of this permit by operating inside a building that serves as a total enclosure, the Permittee shall post signs on all non-alarmed doors and windows leading to the outside from such buildings that state that the doors and windows must remain closed while the process equipment is in use. The signs shall be in at least both English and Spanish. The Permittee shall conduct inspections at least once each calendar week on each building, while the process equipment is in use, to determine if the doors and windows are closed as required by this permit. The Permittee shall maintain a written record of the inspections and any corrective action taken.	Minn. R. 7007.0800, subps. 4 and 5
FABRIC FILTER OPERATING REQUIREMENTS	hdr
The Permittee shall operate and maintain each control device in GP 004 such that it achieves an overall control efficiency for Total Particulate Matter: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain each control device in GP 004 such that it achieves an overall control efficiency for Particulate Matter < 10 micron: greater than or equal to 99.0 percent control efficiency	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000

Facility Name: Northstar Agri Industries - Hallock

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The Permittee shall operate and maintain each fabric filters at all times that any emission unit controlled by the fabric filter is in operation. The Permittee shall document periods of non-operation of the control equipment. EU007 is controlled by CE001, which exhausts to SV005. EU008 is controlled by CE002, which exhausts to SV001. EU017 is controlled by CE003, which exhausts to SV008. EU015 is controlled by a fabric filter that is inherent to the process, and exhausts to SV002.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain each fabric filter in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the associated fabric filter is in operation.	Minn. R. 7007.0800, subp. 4
Pressure Drop: greater than or equal to 0.5 inch of water column and less than or equal to 8.0 inches of water column, unless a new range is set pursuant to Minn. R. 7017.2025, subp. 3 based on the values recorded during the most recent MPCA-approved performance test where compliance was demonstrated. The new range shall be implemented upon receipt of the Notice of Compliance letter granting preliminary approval. The range is final upon issuance of a permit amendment incorporating the change. The Permittee shall record the pressure drop across each fabric filter at least once each calendar week when in operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Visible Emissions: The Permittee shall check the stacks listed in GP004 for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall read and record the pressure drop across each fabric filter, once each day of operation.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the components of each fabric filter. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the recorded pressure drop is outside the required operating range; or - the fabric filter or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the fabric filter.	Minn. R. 7007.0800, subp. 4, 5, and 14
FABRIC FILTER RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping of Daily Visible Emissions and/or Pressure Drop Monitoring: The Permittee shall keep a daily record that contains, at a minimum, the following information for each fabric filter: 1) Printed name of observer 2) Signature of observer 3) Date and time of observation 4) Whether or not visible emissions were observed OR whether the observed pressure drop was within the range specified in this permit, as applicable 5) SV, EU, and CE ID for each unit where visible emissions were observed, and/or where the observed pressure drop was outside the range specified in this permit 6) Description of investigation and corrective actions completed 7) Weather conditions (temperature, cloud cover, wind, precipitation)	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall keep a record of the type and date of any corrective action taken for each fabric filter.	Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Initial Startup to measure PM for SV 005.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM10 for SV 005.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
PM and PM10 Testing Requirements for EU 015 Meal Grinder / Baghouse are located under the Emission Unit EU 015.	hdr

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **GP 005 Equipment with Cyclones**

Associated Items: EU 003 DTDC Dryer Deck 2 / Cyclone

EU 009 Conditioner / Cyclone

EU 010 Flaker / Cyclone

EU 011 Meal Cooker / Cyclone

EU 012 Cake Cooler / Cyclone

EU 013 DTDC Dryer Deck 1 / Cyclone

EU 014 DTDC Cooler Deck / Cyclone

EU 016 Pellet Cooler / Cyclone

SV 002 Flaker, Meal Grinder and Pellet Cooler

SV 003 Conditioner, Meal Cooker and Cake Cooler

SV 004 DTDC Dryer Deck 1&2 and Cooler Deck

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than or equal to 0.040 grains/dry standard cubic foot using 1-Hour Average . This limit applies individually at each SV listed in GP005.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
Particulate Matter < 10 micron: less than or equal to 0.040 grains/dry standard cubic foot using 1-Hour Average . This limit applies individually at each SV listed in GP005.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
OPERATING REQUIREMENTS	hdr
The Permittee shall operate and maintain the associated cyclones at all times that any emission unit listed in GP005 is in operation. The Permittee shall document periods of non-operation of any cyclone.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The Permittee shall operate and maintain each cyclone in accordance with the Operation and Maintenance (O & M) Plan. The Permittee shall keep copies of the O & M Plan available onsite for use by staff and MPCA staff.	Minn. R. 7007.0800, subp. 14
Monitoring Equipment: The Permittee shall install and maintain the necessary monitoring equipment for measuring and recording pressure drop as required by this permit. The monitoring equipment must be installed, in use, and properly maintained when the associated cyclone is in operation.	Minn. R. 7007.0800, subp. 4
Install and maintain a monitoring device in each cyclone that will continously monitor for plugging of the cyclone. The monitoring devices will be connected to audible and visible alarms to indicate plugging or failure of the probe.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000
The monitoring devices and alarm system shall be operated whenever the corresponding cyclone is operating.	Minn. R. 7007.0800, subps. 4 & 5
Visible Emissions: The Permittee shall check the stacks listed in GP005 for any visible emissions once each day of operation during daylight hours. During inclement weather, the Permittee shall record that a visible emission check was not possible due to inclement weather.	Title I Condition: To avoid classification as a major source under 40 CFR Section 52.21 and Minn. R. 7007.3000; Minn. R. 7007.0800, subp. 4 and 5
Periodic Inspections: At least once per calendar quarter, or more frequently as required by the manufacturing specifications, the Permittee shall inspect the components of each cyclone and alarm plugging monitoring device. The Permittee shall maintain a written record of these inspections.	Minn. R. 7007.0800, subp. 4, 5 and 14
Corrective Actions: The Permittee shall take corrective action as soon as possible if any of the following occur: - visible emissions are observed; - the alarm is sounded from a cyclone plugging monitoring device; or - the cyclone or any of its components are found during the inspections to need repair. Corrective actions shall return the pressure drop to within the permitted range, eliminate visible emissions, and/or include completion of necessary repairs identified during the inspection, as applicable. Corrective actions include, but are not limited to, those outlined in the O & M Plan for the cyclone.	Minn. R. 7007.0800, subp. 4, 5, and 14
RECORDKEEPING REQUIREMENTS	hdr

Facility Name: Northstar Agri Industries - Hallock

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Recordkeeping of Daily Visible Emissions: The Permittee shall keep a daily record that contains, at a minimum, the following information for each cyclone: 1) Printed name of observer 2) Signature of observer 3) Date and time of observation 4) Whether or not visible emissions were observed. If not, an explanation of why not. 5) SV, EU, and CE ID for each unit where visible emissions were observed 6) Description of investigation and corrective actions completed 7) Weather conditions (temperature, cloud cover, wind, precipitation)	Title I Condition: To avoid classification as a major source and modification under 40 CFR Section 52.21 and Minn. R. 7007.3000 Minn. R. 7007.0800, subp. 4 and 5
The Permittee shall keep a record of the type and date of any corrective action taken for each cyclone.	Minn. R. 7007.0800, subp. 5
TESTING REQUIREMENTS	hdr
Initial Performance Test: due 365 days after Initial Startup to measure PM for SV 004 (cake cooler/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM10 for SV 004 (cake cooler/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM for SV 003 (pellet cooler/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM10 for SV 003 (pellet cooler/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM for SV 002 (flaker/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM10 for SV 002 (flaker/cyclone).	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **GP 006 Equipment Subject to Industrial Process Equipment Rule**

Associated Items: EU 003 DTDC Dryer Deck 2 / Cyclone

EU 006 Cooling Tower

EU 007 Canola Seed Receiving

EU 008 Seed Cleaner & Aspirator

EU 009 Conditioner / Cyclone

EU 010 Flaker / Cyclone

EU 011 Meal Cooker / Cyclone

EU 012 Cake Cooler / Cyclone

EU 013 DTDC Dryer Deck 1 / Cyclone

EU 014 DTDC Cooler Deck / Cyclone

EU 015 Meal Grinder / Baghouse

EU 016 Pellet Cooler / Cyclone

EU 017 Meal & Pellet Storage & Loadout

EU 018 Mineral Oil Scrubber

EU 019 Biodiesel Process Vent

EU 020 Biodiesel Loadout

FS 001 Extraction Process Equipment Leaks

FS 003 Biodiesel Process Equipment Leaks

TK 001 Hexane Storage Tank

TK 002 Hexane Storage Tank

TK 003 Methanol

What to do	Why to do it
Total Particulate Matter: less than or equal to 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011.0735. This limit applies individually to each unit listed in GP006.	Minn. R. 7011.0715, subp. 1(A)
Opacity: less than or equal to 20 percent opacity . This limit applies individually to each unit listed in GP006.	Minn. R. 7011.0715, subp. 1(B)

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **GP 007 Units Subject to 40 CFR pt. 60, subp. RRR**

Associated Items: EU 022 Biodiesel Reactor 1

EU 023 Biodiesel Reactor 2

What to do	Why to do it
GP 007 is an affected facility under 40 CFR pt. 60, subp. RRR; however, as allowed under 40 CFR Section 63.2535(h), the Permittee has elected to comply with 40 CFR pt. 60, subp. RRR by complying with 40 CFR pt. 63, subp. FFFF for this equipment. The Permittee must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with 40 CFR pt. 63, subp. FFFF, as if they were organic HAP.	40 CFR pt. 60, subp. RRR; 40 CFR Section 63.2535(h); Minn. R. 7011.3430 and 7011.8050

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **EU 004 Refinery Boiler**

Associated Items: SV 006 Refinery Boiler

What to do	Why to do it
EMISSION LIMITS	hdr
Carbon Monoxide: less than or equal to 400 parts per million by volume on a dry basis corrected to 3% oxygen (3-run average) while burning natural gas, propane, or distillate fuel oil. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Front-half Particulate Matter: less than or equal to 0.002 lbs/million Btu heat input while burning natural gas. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Front-half Particulate Matter: less than or equal to 0.007 lbs/million Btu heat input while burning propane. This limit applies at all times except during periods of startup, shutdown and malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Mercury: less than or equal to 0.000003 lbs/million Btu heat input while burning natural gas or propane. This limit applies at all times except during period of startup, shutdown, or malfunction.	40 CFR Section 63.6(f)(1); 40 CFR Section 63.55(a); Minn. R. 7007.3010
Total Particulate Matter: less than or equal to 0.4 lbs/million Btu heat input . Potential emissions, based on maximum capacity and worst-case fuel, is approximately 0.007 lbs/millon Btu heat input.	Minn. R. 7011.0515, subp. 1
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0515, subp. 2
OPERATING REQUIREMENTS	hdr
Fuel type: natural gas and propane only, by design.	Minn. R. 7005.0100, subp. 35a
Daily Recordkeeping. On each day of operation, the Permittee shall record the type and quantity of fuel used in the boiler.	Minn. R. 7007.0800, subp. 4 and 5
Proper Operation and Maintenance: At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain the emission unit subject to the MACT standard and its associated air pollution control and monitoring equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions at least to the levels required by all relevant standards.	40 CFR Section 63.6(e)(1)(i); Minn. R. 7011.7000
Malfunctions shall be corrected as soon as practicable after their occurrence.	40 CFR Section 63.6(e)(l)(ii); Minn. R. 7011.7000
NESHAP COMPLIANCE DEMONSTRATION	hdr
The Permittee shall comply with the Front Half Particulate Matter limits and the Mercury limits by certifying that only the allowed fuels are used. The allowable fuels are pipeline quality natural gas and propane.	40 CFR Section 63.55(a); Minn. R. 7007.3010
The Permittee shall comply with the CO emission limit by submitting certification, upon initial startup of the boiler, from the boiler manufacturer that the boiler (EU 004) was designed to meet the emisison limit for the boiler size and allowed fuels.	40 CFR Section 63.55(a); Minn. R. 7007.3010
NESHAP RECORDKEEPING REQUIREMENTS	hdr
Recordkeeping: The Permittee shall maintain files of all information required by this part in a form suitable and readily available for expeditious inspection and review. The files should be retained for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.	40 CFR Section 63.10(b)(1); Minn. R. 7011.7000
The Permittee shall maintain, at a minimum, the following information in the files: 1) the occurrence and duration of each startup, shutdown, or malfunction of operation; 2) all required measurements needed to demonstrate compliance with a relevant standard; 3) all results of performance test; 4) all measurements as may be necessary to determine the conditions of performance tests and performance evaluations; 5) any information demonstrating whether a source is meeting the requirements for a waiver of record keeping or reporting requirements under this part; 6) all documents supporting initial notifications and notifications of compliance status.	40 CFR Section 63.10(b)(2); Minn. R. 7011.7000
Any change in the information already provided under 40 CFR Section 63.9 shall be provided in writing within 15 calendar days after the change.	40 CFR Section 63.9(j); Minn. Stat. Section 116.07, subd. 4a; Minn. R. 7007.0800, subp. 2

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **EU 005 Fire Pump Engine**

Associated Items: SV 013 Fire Pump Engine

What to do	Why to do it
EMISSION AND OPERATING LIMITS	hdr
Opacity: less than or equal to 20 percent opacity once operating temperatures have been attained.	Minn. R. 7011.2300, subp. 1
Sulfur Dioxide: less than or equal to 0.5 lbs/million Btu heat input (potential emissions from EU 005 given the allowable fuels is 0.05 lb/MMBtu).	Minn. R. 7011.2300, subp. 2
Carbon Monoxide: less than or equal to 5.0 grams per kilowatt-hour	40 CFR Section 60.4205(c); Minn. R. 7011.3520
Total Particulate Matter: less than or equal to 0.80 grams per kilowatt-hour	40 CFR Section 60.4205(c); Minn. R. 7011.3520
Combined Nitrogen Oxides and Non-Methane Hydrocarbons: less than or equal to 10.5 grams per kilowatt-hour.	40 CFR Section 60.4205(c); Minn. R. 7011.3520
The Permittee shall operate and maintain the unit in accordance with the standards as required by 40 CFR Section 60.4205, and according to the manufacturer's written instructions, or according to procedures developed by the owner or operator that are approved by the engine manufacturer, for the entire life of the engine. Settings for the unit may not be changed unless permitted by the manufacturer.	40 CFR Section 60.4206; 40 CFR Section 60.4211(a); Minn. R. 7011.3520
Fuel type: Diesel only by design.	Minn. R. 7005.0100, subp. 35a
Sulfur Content of Fuel: less than or equal to 0.5 percent by weight	Minn. R. 7007.0800, subp. 2
Sulfur Content of Fuel: less than or equal to 500 parts per million and either a minimum cetaine index of 400 or a maximum aromatic content of 35 percent by volume, as required by 40 CFR Section 80.510(a).	40 CFR Section 60.4207(a); Minn. R. 7011.3520
Sulfur Content of Fuel: less than or equal to 15 parts per million and either a minimum cetain index of 40 or a maximum aromatic content of 35 percent by volume, as required by 40 CFR Section 80.510(b). This rule is applicable beginning October 1, 2010. The Permittee may petition the Administrator for approval to use existing non-compliant fuel inventories for up to six months or until exhausted, whichever occurs first. If additional time is needed, the Permittee must submit a new application to the Administrator.	40 CFR Section 60.4207(b) and (c); Minn. R. 7011.3520
The Permittee is authorized to install EU 005, an emergency stationary reciprocating internal combustion engine (as defined in 40 CFR Section 63.6675). This unit is an affected source under 40 CFR Section 63.6590(b)(1)(i). The only applicable provision from the standard is to submit an initial notification, which was satisfied by the submittal of the permit application referenced on the cover page of this permit.	40 CFR Section 63.6590(b)(1)(i); Minn. R. 7011.8150
The Permittee may operate the unit for the purpose of maintenance checks and readiness testing provided that the tests are recommeded by Federal, State, or local government; the manufacturer; the vendor; or the insurance company associated with the engine. Maintenance checks and readiness testing are limited to 100 hours per year. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that the Federal, State or local standards require maintenance and testing of emergency ICE, including fire pump engines, beyond 100 hours per year. There is no time limit on the use of emergency stationary internal combustion engines in emergency situations. Any operation other than emergency operation, maintenance, and testing, as permitted, is prohibited.	40 CFR Section 60.4211(e); Minn. R. 7011.3520
MONITORING AND RECORDKEEPING	hdr
Hours of Operation: The Permittee shall maintain documentation on site that the unit is an emergency engine by design that qualifies under the U.S. EPA memorandum entitled "Calculating Potential to Emit (PTE) for Emergency Generators" dated September 6, 1995, limiting operation to 500 hours per year.	Minn. R. 7007.0800, subp. 4 & 5
The engine shall contain a non-resettable hour meter, prior to startup of the engine.	40 CFR Section 60.4209(a); Minn. R. 7011.3520
Fuel Supplier Certification: The Permittee shall obtain and maintain a fuel supplier certification for each shipment of diesel, certifying that the sulfur content does not exceed 0.5% by weight.	Minn. R. 7007.0800, subp. 4 & 5

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The Permittee must demonstrate compliance according to one of the following methods: (1) Puchasing an engine certified accroding to 40 CFR Part 89 or Part 94, for the same model year and maximum engine power, installed and configured according to the manufacturer's specifications. (2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in Subpart IIII and the methods must have been followed correctly. (3) Keeping records of engine manufacturer data indicated compliance with the standards. (4) Keeping records of control device vendor data indicating compliance with the standards. (5) Conducting an initial performance test to demonstrate compliance with the emission standards according to requirements specified in 40 CFR Section 60.4212, as applicable.	40 CFR Section 60.4211(b); 40 CFR Section 60.4212; Minn. R. 7011.3520

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **EU 015 Meal Grinder / Baghouse**

Associated Items: GP 004 Equipment Vented to or Including Fabric Filters

GP 006 Equipment Subject to Industrial Process Equipment Rule

SV 002 Flaker, Meal Grinder and Pellet Cooler

What to do	Why to do it
Initial Performance Test: due 365 days after Initial Startup to measure PM for the EU 015 Meal Grinder / Baghouse. The piping after the baghouse must be installed such that test port locations meet the requirements of 40 CFR Part 60, Appendix A-1, Method 1 or an alternate MPCA approved location.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1
Initial Performance Test: due 365 days after Initial Startup to measure PM10 for the EU 015 Meal Grinder / Baghouse. The piping after the baghouse must be installed such that test port locations meet the requirements of 40 CFR Part 60, Appendix A-1, Method 1 or an alternate MPCA approved location.	Minn. R. 7007.0800, subp. 4; Minn. R. 7017.2020, subp. 1

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **EU 019 Biodiesel Process Vent**

Associated Items: GP 002 Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 006 Equipment Subject to Industrial Process Equipment Rule

SV 010 Boidiesel Process Vent

What to do	Why to do it
GENERAL REQUIREMENTS	hdr
Emission Limit/Work Practice Standard: The Permittee shall use a recovery device (EU 019 Water Absorber) to maintain the total resource effectiveness (TRE) above 5.0 for a new source.	40 CFR Section 63.2455(a); Table 1 of 40 CFR pt. 63, subp. FFFF; Minn. R. 7011.8050
Permittee shall designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 40 CFR Section 63.115(d), except as follows: 1) Permittee is not required to determine the Group status or the TRE index value for any continuous process vent that is combined with Group 1 batch process vents before a control device or recovery device because the requirements of 40 CFR Section 63.2450(c)(2)(i) apply to the combined stream. 2) When a TRE index value of 4.0 is referred to in 40 CFR Section 63.115(d), TRE index value of 8.0 for new and reconstructed affected sources apply for the purposes of 40 CFR pt. 63, subp. FFFF. 3) When 40 CFR Section 63.115(d) refers to emission reductions specified in 40 CFR Section 63.113(a), the reductions specified in Table 1 in 40 CFR pt. 63, subp. FFFF apply.	40 CFR Section 63.2455(b); Minn. R. 7011.8050
TRE Index Value Determination: The Permittee shall conduct a TRE determination and calculate the TRE index value according to the procedures in 40 CFR Section 63.115(d)(1) or (2) and the TRE equation in 40 CFR Section 63.115(d)(3).	40 CFR Sections 63.2455(b) and 63.115(d); Minn. R. 7011.8050
TRE Index Calculation Option 1: The Permittee may use engineering assessments to determine vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate for the representative operating condition expected to yield the lowest TRE index value. i) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR Section 63.115(d)(3) is greater than 8.0, then the Permittee is not required to perform the measurements specified in 40 CFR Section 63.115(d)(2). ii) If the TRE value calculated using such engineering assessment and the TRE equation in 40 CFR Section 63.115(d)(3) is less than or equal to 5.0, then the Permittee is required to perform the measurements specified in 40 CFR Section 63.115(d)(2) for group determination or consider the process vent a Group 1 vent and comply with the emission reduction specified in Table 1 of 40 CFR pt. 63, subp. FFFF.	40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050
CONTINUED: iii) Engineering assessment includes, but is not limited to, the following: (A) Previous test results provided the tests are representative of current operating practices at the process unit. (B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions. (C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent. (D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to: (1) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations, (2) Estimation of maximum flow rate based on physical equipment design such as pump or blower capacities,	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050

CONTINUED: (3) Estimation of TOC or organic HAP concentrations based on saturation conditions, (4) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all TOC in the vent stream were the compound with the highest heating value. (E) All data, assumptions, and procedures used in the engineering assessment shall be documented.	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(1); Minn. R. 7011.8050
TRE Index Calculation Option 2: Except as provided in 40 CFR Section 63.115(d)(1), vent stream flow rate, net heating value, TOC emission rate, and total organic HAP emission rate shall be measured and calculated according to the procedures below and used as input to the TRE index value calculation as described later in this permit. i) Permittee shall determine the vent stream volumetric flow rate (Qs), in standard cubic meters per minute at 20 degrees Celsius using Method 2, 2A, 2C, or 2D of 40 CFR pt 60, appendix A, as appropriate. If the vent stream tested passes through a final steam jet ejector and is not condensed, the vent stream volumetric flow shall be corrected to 2.3 percent moisture. ii) Permittee shall determine the molar composition of the vent stream, which is used to calculate net heating value, using on of the methods in 40 CFR Section 63.115(d)(2)(ii)(A) through (C).	40 CFR Sections 63.2455(b) and 63.115(d)(2); Minn. R. 7011.8050
CONTINUED: iii) The Permittee shall calculate the net heating value of the vent stream as specified in Appendix B of this permit. iv) The Permittee shall calculate the emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream as specified in Appendix B of this permit. v) In order to determine whether a vent stream is halogenated, the Permittee shall calculate the mass emission rate of halogen atoms contained in organic compounds. A) The vent stream concentration of each organic compound containing halogen atoms (parts per million by volume, by compound) shall be determined based on the procedures in 63.115(d)(2)(iiv)(A)(1) through (4). B) The Permittee shall calculate the mass emission rate of halogen atoms as specified in Appendix B of this permit.	CONTINUED: 40 CFR Sections 63.2455(b) and 63.115(d)(2); Minn. R. 7011.8050
TRE Index Calculation Equation: The Permittee shall calculate the TRE index value of the vent stream using the following procedures: i) The Permittee shall calculate the TRE index for a vent stream controlled by a flare or incinerator as specified in Appendix B of this permit. ii) For nonhalogenated vent streams, the Permittee shall calculate the TRE index value based on the use of a flare, a thermal incinerator with 0% heat recovery, and a thermal incinerator with 70% heat recovery and shall select the lowest TRE index value. The Permittee shall use the applicable coefficients in Table 2 of 40 CFR pt. 63, subp. G for nonhalogenated vent streams located within new sources. iii) For halogenated vent streams, the Permittee shall calculate the TRE index value based on the use of a thermal incinerator with 0% heat recovery, and a scrubber. The Permittee shall use the applicable coefficients Table 2 of 40 CFR pt. 63, subp. G for halogenated vent streams located within new sources.	40 CFR Sections 63.2455(b) and 63.115(d)(3); Minn. R. 7011.8050
Recovery Device Requirements: If a recovery device is used to maintain the TRE above a specified threshold, the Permittee must meet the requirements of 40 CFR Section 63.982(e) and the requirements referenced therein, except as specified in 40 CFR Section 63.2450 and as follows. When 40 CFR Section 63.993 uses the phrase the TRE index value is between the level specified in a referencing subpart and 4.0, the phrase the TRE index value is greater than 5.0 but less than or equal to 8.0 applies for a new and reconstructed affected source, for the purposes of 40 CFR pt. 63, subp. FFFF.	40 CFR Sections 63.2455(c) and 63.982(e); Minn. R. 7011.8050

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If a final recovery device is used to maintain a TRE above a level specified in a referencing subpart the Permittee shall meet the requirements in 40 CFR Section 63.993 and the monitoring, recordkeeping, and reporting requirements referenced therein that are applicable to the recovery device being used; the applicable monitoring requirements in 40 CFR Section 63.996 and the recordkeeping and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 40 CFR Section 40 CFR Sections 63.998 and 63.999. No other provisions of 40 CFR pt. 63, subp. SS apply to process vent emissions routed to a final recovery device.	40 CFR Sections 63.2455(c) and 63.982(e); Minn. R. 7011.8050
Final recovery device equipment and operating requirements: 1) The Permittee using a final recovery device to maintain a TRE above a level specified in a referencing subpart shall meet the requirements of this 40 CFR Section 63.993(a). 2) Recovery devices used to comply with the provisions of a referencing subpart and 40 CFR pt. 63, subp. SS shall be operated at all times when emissions are vented to them.	40 CFR Sections 63.2455(c), 63.993(a), and 63.982(e); Minn. R. 7011.8050
Recovery device performance test requirements: There are no performance test requirements for recovery devices. TRE index value determination information shall be recorded as specified in 40 CFR Section 63.998(a)(3).	40 CFR Sections 63.2455(c), 63.993(b), and 63.982(e); Minn. R. 7011.8050
Recovery device monitoring requirements: If the TRE index value is greater than 5.0 but less than or equal to 8.0, either an organic monitoring device capable of providing a continuous record or a scrubbing liquid temperature monitoring device & a specific gravity monitoring device, each capable of providing a continuous record, shall be used. If the difference between the specific gravity of the saturated scrubbing fluid & specific gravity of the fresh scrubbing fluid is less than 0.02 specific gravity units, an organic monitoring device capable of providing a continuous record shall be used. Monitoring results shall be recorded as specified in 40 CFR Section 63.998(b) & (c), as applicable. General requirements for monitoring & continuous parameter monitoring systems are contained in 40 CFR Section 63.996. Note: If the TRE is shown to be greater than 8.0, then, in accordance with 40 CFR Section 63.993(c), the continuous monitoring requirements are not applicable.	40 CFR Sections 63.2455(c), 63.993(c), and 63.982(e); Minn. R. 7011.8050

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Permit Number: 06900025 - 002

Subject Item: **EU 021 Flare**

Associated Items: CE 004 Flaring

GP 002 Equipment Subject to 40 CFR pt. 63, subp. FFFF

SV 011 Flare

What to do	Why to do it
EMISSION LIMITS	hdr
Total Particulate Matter: less than 0.3 grains/dry standard cubic foot of exhaust gas unless required to further reduce emissions to comply with the less stringent limit of either Minn. R. 7011.0730 or Minn. R. 7011. 0735.	Minn. R. 7011.0610, subp. 1(A)(1)
Opacity: less than or equal to 20 percent opacity except for one six-minute period per hour of not more than 60 percent opacity.	Minn. R. 7011.0610, subp. 1(A)(2)
OPERATING CONDITIONS	hdr
Except when complying with 40 CFR Section 63.2485, for EU 021/CE 004, the Permittee must meet the requirements of 40 CFR Section 63.982(b) and the requirements referenced therein.	40 CFR Section 63.2450(e)(2); Minn. R. 7011.8050
Requirements for flare compliance assessments. 1) As part of a flare compliance assessment required in 40 CFR Section 63.987(b), Permittee has the option of demonstrating compliance with the requirements of 40 CFR Section 63.11(b) by complying with the requirements in either 40 CFR Section 63.11(b)(6)(i) or 40 CFR Section 63.987(b)(3)(ii). AND 2) If Permittee elects to meet the requirements in 40 CFR Section 63.11(b)(6)(i), the Permittee must keep the following flare compliance assessment records: i) Keep records as specified in 40 CFR Section 63.998(a)(1)(i), except that a record of the heat content determination is not required, and ii) Keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity. Include these records in the flare compliance report required in 40 CFR Section 63.999(a)(2).	40 CFR Section 63.2450(f); Minn. R. 7011.8050
Permittee shall meet the requirements in 40 CFR Section 63.983 for closed vent systems; 40 CFR Section 63.987 for flares; 40 CFR Section 63.997(a)-(c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements referenced therein; and the applicable recordkeeping and reporting requirements of 40 CFR Sections 63.998 and 63.999. No other provisions of 40 CFR pt. 63, subp. SS apply to emissions vented through a closed vent system to a flare.	40 CFR Sections 63.2450(f) and 63.982(b); Minn. R. 7011.8050
CLOSED VENT SYSTEM	hdr
Closed vent system equipment and operating requirements. Except for closed vent systems operated and maintained under negative pressure, the provisions of 40 CFR Section 63.983 apply to closed vent systems collecting regulated material from a regulated source. 1) Each closed vent system shall be designed and operated to collect the regulated material vapors from TK 003, and to route the collected vapors to a control device, EU 021/CE 004. 2) The closed vent system shall be operated at all times when emissions are vented to, or collected by, them.	40 CFR Sections 63.2450(f), 63.982(b), and 63.983(a); Minn. R. 7011.8050
CONTINUED: 3) Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines, the Permittee shall comply with one of the following provisions for each closed vent system that contains bypass lines that could divert a vent stream to the atmosphere: i) Properly install, maintain, and operate a flow indicator that is capable of taking periodic readings. Records shall be generated as specified in 40 CFR Section 63.998(d)(1)(ii)(A). The flow indicator shall be installed at the entrance to any bypass line. OR ii) Secure the bypass line valve in the non-diverting position with a car-seal or a lock-and-key type configuration. Records shall be generated as specified in 40 CFR Section 63.998(d)(1)(ii)(B).	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.983(a); Minn. R. 7011.8050

Closed vent system inspection and monitoring requirements. Inspection records shall be generated as specified in 40 CFR Section 63.998(d)(1)(iii) and (iv). 1) Except for any closed vent systems that are designated as unsafe or difficult to inspect as provided in 40 CFR Section 63.983(b)(2) and (3), each closed vent system shall be inspected using one of the following methods: i) If the closed vent system is constructed of hard-piping, the Permittee shall comply with the following requirements: A) Conduct an initial inspection according to the procedures in 40 CFR Section 63.983(c); and B) Conduct annual inspections for visible, audible, or olfactory indications of leaks. OR ii) If the closed vent system is constructed of ductwork, the Permittee shall conduct an initial and annual inspection according to the procedures in 40 CFR Section 63.983(c).	40 CFR Sections 63.2450(f), 63.982(b), and 63.983(b); Minn. R. 7011.8050
CONTINUED: 2) Any parts of the closed vent system that are designated, as described in 40 CFR Section 63.998(d)(1)(i), as unsafe to inspect are exempt from the inspection requirements of 40 CFR Section 63.983(b)(1) if the following conditions are met. i) The Permittee determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with 40 CFR Section 63.983(b)(1); and ii) The Permittee has a written plan that requires inspection of the equipment as frequently as practical during safe-to-inspect times. Inspection is not required more than once annually.	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.983(b); Minn. R. 7011.8050
CONTINUED: 3) Any parts of the closed vent system that are designated, as described in 40 CFR Section 63.998(d)(1)(i), as difficult-to-inspect are exempt from the inspection requirements of 40 CFR Section 63.983(b)(1) if the following provisions apply: i) The Permittee determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters (7 feet) above a support surface; and ii) The Permittee has a written plan that requires inspection of the equipment at least once every 5 years. (4) For each bypass line, the Permittee shall comply with 40 CFR Section 63.983(b)(4)(i) or (ii). (i) If a flow indicator is used, take a reading at least once every 15 minutes. (ii) If the bypass line valve is secured in the non-diverting position, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass line.	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.983(b); Minn. R. 7011.8050
Closed vent system inspection procedures. 1) Each closed vent system subject to 40 CFR Section 63.983(c) shall be inspected according to the procedures specified in 40 CFR Section 63.983(c)(1)(i) through (vii). 2) The instrument probe shall be traversed around all potential leak interfaces as described in Method 21 of 40 CFR part 60, appendix A. (3) Except as provided in the following item #4, inspections shall be performed when the equipment is in regulated material service, or in use with any other detectable gas or vapor. 4) Inspections of the closed vent system collecting regulated material from a transfer rack shall be performed only while a tank truck or railcar is being loaded or is otherwise pressurized to normal operating conditions with regulated material or any other detectable gas or vapor.	40 CFR Sections 63.2450(f), 63.982(b), and 63.983(c); Minn. R. 7011.8050
Closed vent system leak repair provisions. 1) If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by 40 CFR Section 63.983(b)(1)(i)(B), the Permittee shall either eliminate the leak or monitor the equipment according to the procedures in 40 CFR Section 63.983(c). 2) Leaks, as indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspections, shall be repaired as soon as practical, except as provided in 40 CFR Section 63.983(d)(3). Records shall be generated as specified in 40 CFR Section 63.998(d)(1)(iii) when a leak is detected. (i) A first attempt at repair shall be made no later than 5 days after the leak is detected. (ii) Except as provided in 40 CFR Section 63.983(d)(3), repairs shall be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.	40 CFR Sections 63.2450(f), 63.982(b), and 63.983(d); Minn. R. 7011.8050
CONTINUED: 3) Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown, as defined in 40 CFR Section 63.981, or if the Permittee determines that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment shall be completed as soon as practical, but not later than the end of the next closed vent system shutdown.	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.983(d); Minn. R. 7011.8050

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FLARE	hdr
The flare shall meet the performance requirements in 40 CFR Section 63.11(b).	40 CFR Sections 63.2450(f), 63.982(b), and 63.987(a); Minn. R. 7011.8050
Flare compliance assessment. 1) The Permittee shall conduct an initial flare compliance assessment of the flare (EU 021/CE 004). Flare compliance assessment records shall be kept as specified in 40 CFR Section 63.998(a)(1) and a flare compliance assessment report shall be submitted as specified in 40 CFR Section 63.999(a)(2). The Permittee is not required to conduct a performance test to determine percent emission reduction or outlet regulated material or total organic compound concentration when a flare is used. 2) Flare compliance assessments shall meet the requirements specified in 40 CFR Section 63.987(b)(3)(i)-(iv).	40 CFR Sections 63.2450(f), 63.982(b), and 63.987(b); Minn. R. 7011.8050
Flare monitoring requirements. Where a flare is used, the following monitoring equipment is required: a device (including but not limited to a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting that at least one pilot flame or the flare flame is present. Flare flame monitoring and compliance records shall be kept as specified in 40 CFR Section 63.998(a)(1) and reported as specified in 40 CFR Section 63.999(a).	40 CFR Sections 63.2450(f), 63.982(b), and 63.987(c); Minn. R. 7011.8050
If a waiver for a flare assessment is not approved by the Administrator, the Permittee shall comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR Section 63.997(a)-(c).	40 CFR Sections 63.2450(f), 63.982(b), and 63.997(a)-(c); Minn. R. 7011.8050
RECORDKEEPING REQUIREMENTS	hdr
Upon request, the Permittee shall make available to the Administrator such records as may be necessary to determine the conditions of flare compliance assessments performed pursuant to 40 CFR Section 63.987(b).	40 CFR Sections 63.2450(f), 63.982(b), and 40 CFR Sections 63.998(a)(1); Minn. R. 7011.8050
Flare compliance assessment records. When using a flare to comply with this subpart, record the following information for each flare compliance assessment performed pursuant to 40 CFR Section 63.987(b). As specified in 40 CFR Section 63.999(a)(2)(iii)(A), the Permittee shall include this information in the flare compliance assessment report. A) Flare design (i.e., steam-assisted, air-assisted, or non-assisted); B) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the flare compliance assessment; and C) All periods during the flare compliance assessment when all pilot flames are absent or, if only the flare flame is monitored, all periods when the flare flame is absent.	40 CFR Sections 63.2450(f), 63.982(b), and 40 CFR Sections 63.998(a)(1)(i); Minn. R. 7011.8050
Monitoring records. Each Permittee shall keep up to date and readily accessible hourly records of whether the monitor is continuously operating and whether the flare flame or at least one pilot flame is continuously present.	40 CFR Sections 63.2450(f), 63.982(b), and 40 CFR Sections 63.998(a)(1)(ii); Minn. R. 7011.8050
Compliance records. A) The Permittee shall keep records of the times and duration of all periods during which the flare flame or all the pilot flames are absent. This record shall be submitted in the periodic reports as specified in 40 CFR Section 63.999(c)(3). B) The Permittee shall keep records of the times and durations of all periods during which the monitor is not operating.	40 CFR Sections 63.2450(f), 63.982(b), and 40 CFR Sections 63.998(a)(1)(iii); Minn. R. 7011.8050
REPORTING REQUIREMENTS	hdr
Flare compliance assessment notifications and reports. i) The Permittee shall notify the Administrator of the intention to conduct a flare compliance assessment at least 30 days before such a compliance demonstration is scheduled to allow the Administrator the opportunity to have an observer present. If after 30 days notice for such an initially scheduled compliance demonstration, there is a delay (due to operational problems, etc.) in conducting the scheduled compliance demonstration, the Permittee of an affected facility shall notify the Administrator as soon as possible of any delay in the original demonstration date. The Permittee shall provide at least 7 days prior notice of the rescheduled date of the compliance demonstration, or arrange a rescheduled date with the Administrator by mutual agreement.	40 CFR Sections 63.2450(f), 63.982(b), and 63.999(a); Minn. R. 7011.8050
CONTINUED: ii) Flare compliance assessment reports, not submitted as part of a Notification of Compliance Status report, shall be submitted to the Administrator within 60 days of completing the test or determination. iii) Any application for a waiver of an initial flare compliance assessment, as allowed by 40 CFR Section 63.997(b)(2), shall be submitted no later than 90 days before the compliance assessment is required. The application for a waiver shall include information justifying the Permittee's request for a waiver, such as the technical or economic infeasibility, or the impracticality, of the source performing the test.	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.999(a); Minn. R. 7011.8050

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CONTINUED: iv) Any application to substitute a prior compliance assessment for an initial compliance assessment, as allowed by 40 CFR Section 63.997(b)(1), shall be submitted no later than 90 days before the compliance test is required. The application for substitution shall include information demonstrating that the prior compliance assessment was conducted using the same methods specified in 40 CFR Section 63.997(e) or 40 CFR Section 63.987(b)(3), as applicable. The application shall also include information demonstrating that no process changes have been made since the test, or that the results of the compliance assessment reliably demonstrate compliance despite process changes. v) If a flare assessment is performed, the Permittee shall comply with the applicable report submittal and content requirements in 40 CFR Section 63.999(a)(2).	CONTINUED: 40 CFR Sections 63.2450(f), 63.982(b), and 63.999(a); Minn. R. 7011.8050
Periodic reports shall include the reporting period dates, the total source operating time for the reporting period, and, as applicable, all information specified in this section and in the referencing subpart, including reports of periods when monitored parameters are outside their established ranges. For the closed vent system, the Permittee shall submit as part of the periodic report the information specified in 40 CFR Section 63.999(c)(2)(i)-(iii), as applicable. For the flare, the Permittee shall report all periods when all pilot flames were absent or the flare flame was absent as recorded in 40 CFR Section 63.998(a)(1)(i)(C). For storage vessels, the Permittee shall include in each periodic report the information specified in 40 CFR Section 63.999(c)(4)(i)-(iii).	40 CFR Sections 63.2450(f), 63.982(b), and 63.999(c); Minn. R. 7011.8050

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **TK 003 Methanol**

Associated Items: CE 004 Flaring

GP 002 Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 006 Equipment Subject to Industrial Process Equipment Rule

What to do	Why to do it
Permittee must meet each emission limit in Table 4 of 40 CFR pt. 63, subp. FFFF that applies to TK 003, and must meet each applicable requirement specified in 40 CFR Section 63.2470(b)-(e).	40 CFR Section 63.2470(a); Minn. R. 7011.8050
The Permittee shall reduce total organic HAP emissions from TK 003 by venting emissions through a closed vent system to a flare, CE 004. (From Table 4 for Emission Limitations for Group 1 Storage Tank with a maximum true vapor pressure of total HAP at the storage temperature is less than 76.6 kilopascals.)	Table 4 of 40 CFR pt. 63, subp. FFFF; 40 CFR Section 63.2470(a); Minn. R. 7011.8050
Storage tank planned routine maintenance: The emission limits in Table 4 of 40 CFR pt. 63, subp. FFFF for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in Table 4 of 40 CFR pt. 63, subp. FFFF, must not exceed 240 hours per year (hr/yr). Permittee may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded.	40 CFR Section 63.2470(d); Minn. R. 7011.8050

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: FS 002 Paved Haul Road Fugitive Emissions

What to do	Why to do it
The Permittee shall not cause or permit the handling, use, transporting, or storage of any material in a manner which may allow avoidable amounts of particulate matter to become airborne. The Permittee shall not cause or permit a building or its appurtenances or a road, or a driveway, or an open area to be constructed, used, repaired, or demolished without applying all such reasonable measures as may be required to prevent particulate matter from becoming airborne. All persons shall take reasonable precautions to prevent the discharge of visible fugitive dust emissions beyond the lot line of the property on which the emissions originate. The commissioner may require such reasonable measures as may be necessary to prevent particulate matter from becoming airborne.	Minn. R. 7011.0150
Haul Roads (roads used by trucks transporting grain, meal, n-hexane, methanol or biodiesel) requirements: - All haul roads must be paved with hot mix asphalt or concrete. - The Permittee shall use only salt (not sand) for wintertime ice abatement on haul roads, unless refined modeling is approved by the MPCA as discussed below. If refined modeling is approved, then sand can be used November through March. - The Permittee shall inspect all haul roads daily for visible silt accumulation. - The Permittee shall sweep/clean all haul roads monthly or when silt has accumulated to a visible level on the road, whichever occurs first. - The Permittee shall install signs limiting vehicle speed to 10 mph plant-wide.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
Silt Loading Testing for Paved Haul Roads The Permittee shall conduct onsite silt loading testing from paved roads in accordance with a performance test plan approved by the Commissioner, unless refined modeling is approved by the MPCA as discussed below. The initial testing shall be conducted within 12 months of the start-up of the facility; subsequent winter and non-winter silt loading testing shall be conducted each year (e.g. January and July). The tests shall be conducted in accordance with EPA guidance in Appendix C.1 and C.2 of AP-42 and follow performance test procedures as required by Minn. R. 7017.2001 - 2060. The Permittee shall keep records of silt loading testing.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
If the tested silt loading values are found to be greater than those assumed in the emissions calculations, the Permittee shall notify the Commissioner within 30 days of the test, propose corrective actions within 60 days of the test, and implement corrective actions within 120 days of the test. Corrective actions include some combination of: better controls (e.g. more frequent road cleanings, better road cleaning methods, or both), better road dust quantification including EPA-quality peer review (e.g. Midwest Research Institute exposure profiling method with MRI peer review, Midwest Research Institute exposure profiling method with EPA peer review, other possible methods with EPA peer review or EPA-approved contractor peer review), or MPCA-approved remodeling.	40 CFR pt. 50; Minn. Stat. Section 116.07, subds. 4a & 9; Minn. R. 7007.0100, subps. 7A, 7L & 7M; Minn. R. 7007.0800, subps. 1, 2 & 4; Minn. R. 7009.0010-7009.0080
The Permittee may submit revised modeling including the emissions calculations for all roads. The silt loading values submitted in the final application dated September 24, 2007 must be used in the calculations of the emissions for the fugitive dust emissions for the road traffic. The revised modeling should account for sand being used on the roads in November through March. If the revised modeling is approved by the MPCA, subsequent silt loading testing will not be required and the use of sand on the roads in November through March will be allowed. The revised modeling must be submitted within one year of permit issuance.	Minn. 7007.0800 subp. 2, 4 and 5

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Subject Item: **FS 003 Biodiesel Process Equipment Leaks**

Associated Items: GP 002 Equipment Subject to 40 CFR pt. 63, subp. FFFF

GP 006 Equipment Subject to Industrial Process Equipment Rule

What to do	Why to do it
Fugitive Biodiesel Sources: Within 30 days of startup of any unit in GP 002, the Permittee shall record and maintain an inventory of all fugitive sources that comprise FS 003 (e.g., 10 pumps in light liquid service, 15 connectors, etc.). This list shall be updated at the time any change is made and be maintained on site. Each fugitive source shall be labeled to correlate it to the equipment inventory.	40 CFR Section 63.2480(a); Minn. R. 7011.8050; Minn. R. 7007.0800, subp. 4 and 5
A. OPERATING CONDITIONS	hdr
Requirements for Equipment Leaks: Permittee must meet each requirement in Table 6 to 40 CFR pt. 63, subp. FFFF that applies to your equipment leaks, except as specified below. The Permittee may elect may elect to comply with the provisions in 40 CFR Section 63.2480(b)(1)-(5) as an alternative to the referenced provisions in 40 CFR pt. 63, subp. H or 40 CFR pt. 63, subp. UU. The requirements for pressure testing in 40 CFR Section 63.1036(b) may be applied to all processes, not just batch processes. For the purposes of this 40 CFR pt. 63, subp. FFFF, pressure testing for leaks in accordance with 40 CFR Section 63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.	40 CFR Section 63.2480(a); Minn. R. 7011.8050
Applicable Equipment: Equipment in organic HAP service is subject to Leak Detection and Repair Requirements. In Organic HAP Service means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.2550; Minn. R. 7011.8050
B. EQUIPMENT IDENTIFICATION AND DESIGNATION	hdr
General equipment identification: The Permittee shall identify equipment subject to 40 CFR pt. 63, subp. UU (Equipment Leaks Control Level 2 Standards). Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, by designation of process unit or affected facility boundaries by some form of weatherproof identification, or by other appropriate methods.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(a); Minn. R. 7011.8050
Additional equipment identification: The Permittee shall specifically identify equipment subject to any of the provisions in 40 CFR Sections 63.1023-63.1034 as listed below. These requirements do not apply to batch product processes where the Permittee has elected to pressure test the batch product process equipment train pursuant to 40 CFR Section 63.1036.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b); Minn. R. 7011.8050
Additional equipment identification, Connectors: Except for inaccessible, ceramic, or ceramic-lined connectors meeting the provision of 40 CFR Section 63.1027(e)(2) and instrumentation systems identified pursuant to 40 CFR Section 63.1022(b)(4), the Permittee shall identify the connectors subject to the requirements of 40 CFR pt. 63, subp. UU. Connectors need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions 40 CFR pt. 63, subp. UU are identified as a group, and the number of connectors subject is indicated. With respect to connectors, the identification shall be complete no later than the completion of the initial survey required by 40 CFR Section 63.1022(a).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(1); Minn. R. 7011.8050
Additional equipment identification, Routed to a process or fuel gas system or equipped with a closed vent system and control device: The Permittee shall identify the equipment that the Permittee elects to route to a process or fuel gas system or equip with a closed vent system and control device, under the provisions of 40 CFR Section 63.1026(e)(3) (pumps in light liquid service), 40 CFR Section 63.1028(e)(3) (agitators), 40 CFR Section 63.1030(d) (pressure relief devices in gas and vapor service), 40 CFR Section 63.1031(e) (compressors), or 40 CFR Section 63.1037(a) (alternative means of emission limitation for enclosed-vented process units).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(2); Minn. R. 7011.8050
Additional equipment identification, Pressure relief devices: The Permittee shall identify the pressure relief devices equipped with rupture disks, under the provisions of 40 CFR Section 63.1030(e).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(3); Minn. R. 7011.8050
Additional equipment identification, Instrumentation systems: The Permittee shall identify instrumentation systems subject to the provisions of 40 CFR Section 63.1029. Individual components in an instrumentation system need not be identified.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(4); Minn. R. 7011.8050

Additional equipment identification, Equipment in service less than 300 hours per calendar year: The Permittee shall identify, either by list, location (area or group), or other method, of equipment in regulated material service less than 300 hours per calendar year within a process unit or affected facilities subject to the provisions of 40 CFR pt. 63, subp. UU shall be recorded.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(b)(5); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor: 1) Designation and criteria for unsafe-to-monitor: Valves meeting the provisions of 40 CFR Section 63.1025(e)(1), pumps meeting the provisions of 40 CFR Section 63.1026(e)(6), connectors meeting the provisions of 40 CFR Section 63.1027(e)(1), and agitators meeting the provisions of 40 CFR Section 63.1028(e)(7) may be designated unsafe-to-monitor if the Permittee determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements of 40 CFR pt. 63, subp. UU.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(1); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor, continued: 2) Designation and criteria for difficult-to-monitor: Valves meeting the provisions of 40 CFR Section 63.1025(e)(2) may be designated difficult-to-monitor if the provisions 40 CFR Section 63.1022(c)(2)(i) apply. Agitators meeting the provisions of 40 CFR Section 63.1028(e)(5) may be designated difficult-to-monitor if the provisions of 40 CFR Section 63.1022(c)(2)(ii) apply.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(2); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor, continued: 3) Identification of unsafe or difficult-to-monitor equipment: The Permittee shall record the identity of equipment designated as unsafe-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(1) and the planned schedule for monitoring this equipment. The Permittee shall record the identity of equipment designated as difficult-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(2), the planned schedule for monitoring this equipment, and an explanation why the equipment is unsafe or difficult-to-monitor. This record must be kept at the plant and be available for review by an inspector.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(3); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe or difficult-to-monitor, continued: 4) Written plan requirements: i) The Permittee of equipment designated as unsafe-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(1) shall have a written plan that requires monitoring of the equipment as frequently as practical during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in 40 CFR Section 63.1024 if a leak is detected. ii) The Permittee of equipment designated as difficult-to-monitor according to the provisions of 40 CFR Section 63.1022(c)(2) shall have a written plan that requires monitoring of the equipment at least once per calendar year and repair of the equipment according to the procedures in 40 CFR Section 63.1024 if a leak is detected.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(c)(4); Minn. R. 7011.8050
Special equipment designations - Equipment that is unsafe-to-repair: 1) Designation and criteria. Connectors subject to the provisions of 40 CFR Section 63.1024(e) may be designated unsafe-to-repair if the Permittee determines that repair personnel would be exposed to an immediate danger as a consequence of complying with the repair requirements of 40 CFR pt. 63, subp. UU, and if the connector will be repaired before the end of the next process unit or affected facility shutdown as specified in 40 CFR Section 63.1024(e)(2). 2) Identification of equipment. The identity of connectors designated as unsafe-to-repair and an explanation why the connector is unsafe-to-repair shall be recorded.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(d); Minn. R. 7011.8050

Special equipment designations: Equipment in heavy liquid service: The Permittee of equipment in heavy liquid service shall comply with the following requirements. 1) Permittee shall retain information, data, and analyses used to determine that a piece of equipment is in heavy liquid service. OR 2) When requested by the Administrator, Permittee shall demonstrate that the piece of equipment or process is in heavy liquid service. Permittee s determination or demonstration that a piece of equipment or process is in heavy liquid service shall include an analysis or demonstration that the process fluids do not meet the definition of in light liquid service. Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1022(f); Minn. R. 7011.8050
C. MONITORING AND RECORDKEEPING	hdr
Instrument monitoring methods: The Permittee shall comply with the requirements specified in 40 CFR Section 63.1023(b)(1)-(6) for Instrument monitoring, as required under 40 CFR pt 63 subp. UU.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(b); Minn. R. 7011.8050
Instrument monitoring using background adjustments: The Permittee may elect to adjust or not to adjust the instrument readings for background. If the Permittee elects not to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR Section 63.1023(b)(1)-(5). In such cases, all instrument readings shall be compared directly to the applicable leak definition for the monitored equipment to determine whether there is a leak or to determine compliance with 40 CFR Section 63.1030(b) (pressure relief devices) or 40 CFR Section 63.1031(f) (alternative compressor standard). If the Permittee elects to adjust instrument readings for background, the Permittee shall monitor the equipment according to the procedures specified in 40 CFR Section 63.1023(c)(1)-(4).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(c); Minn. R. 7011.8050
Sensory monitoring methods: Sensory monitoring consists of visual, audible, olfactory, or any other detection method used to determine a potential leak to the atmosphere.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(d); Minn. R. 7011.8050
D. EQUIPMENT STANDARDS FOR LEAKS	hdr
Leaking equipment identification and records: 1) When each leak is detected pursuant to the monitoring specified in 40 CFR Section 63.1023(a), the Permittee shall attach a weatherproof and readily visible identification to the leaking equipment. 2) When each leak is detected, the Permittee shall record and keep the information specified in 40 CFR Section 63.1024(f) pursuant to 40 CFR pt. 63, subp. FFFF, except for the information for connectors complying with the 8 year monitoring period allowed under 40 CFR Section 63.1027(b)(3)(iii) shall be kept 5 years beyond the date of its last use.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1023(e); Minn. R. 7011.8050
Leak repair schedule: The Permittee shall repair each leak detected as soon as practical, but not later than 15 calendar days after it is detected, except as provided in 40 CFR Section 63.1024(d) and (e). A first attempt at repair as defined in 40 CFR pt. 63, subp. UU shall be made no later than 5 calendar days after the leak is detected. First attempt at repair for pumps includes, but is not limited to, tightening the packing gland nuts and/or ensuring that the seal flush is operating at design pressure and temperature. First attempt at repair for valves includes, but is not limited to, tightening the bonnet bolts, and/or replacing the bonnet bolts, and/or tightening the packing gland nuts, and/or injecting lubricant into the lubricated packing.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(a); Minn. R. 7011.8050
Leak identification removal: 1) Valves and connectors in gas/vapor and light liquid service. The leak identification on a valve in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR Section 63.1025(d)(2), and no leak has been detected during that monitoring. The leak identification on a connector in gas/vapor or light liquid service may be removed after it has been monitored as specified in 40 CFR Section 63.1027(b)(3)(iv) and no leak has been detected during that monitoring. 2) Other equipment. The identification that has been placed, pursuant to 40 CFR Section 63.1023(e)(1), on equipment determined to have a leak, except for a valve or for a connector in gas/vapor or light liquid service that is subject to the provisions of 40 CFR Section 63.1027(b)(3)(iv), may be removed after it is repaired.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(c) Minn. R. 7011.8050

Delay of repair: Delay of repair is allowed for any of the conditions specified in 40 CFR Section 63.1024(d)(1)-(5). The Permittee shall maintain a record of the facts that explain any delay of repairs and, where appropriate, why the repair was technically infeasible without a process unit shutdown.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(d); Minn. R. 7011.8050
Unsafe-to-repair - Connectors: Any connector that is designated, as described in 40 CFR Section 63.1022(d), as an unsafe-to-repair connector is exempt from the requirements of 40 CFR Section 63.1027(d) and 40 CFR Section 63.1024(a).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(e); Minn. R. 7011.8050
Leak repair records: The Permittee shall record and maintain, for each leak detected, the information specified in 40 CFR Section 63.1024(f)(1)-(5) pursuant to 40 CFR pt. 63, subp. FFFF. 1) The date of first attempt to repair the leak. 2) The date of successful repair of the leak. 3) Maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A at the time the leak is successfully repaired or determined to be non-repairable. 4) Record that the repair was delayed and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak as specified in 40 CFR Section 63.1024(f)(4)(i) and (ii). AND 5) Dates of process unit or affected facility shutdowns that occur while the equipment is unrepaired.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1024(f); Minn. R. 7011.8050
D-1. Standards for Valves in Gas and Vapor Service and in Light Liquid Service	hdr
Leak detection: Unless otherwise specified in 40 CFR Section 63.1021(b) or (e), or 40 CFR pt. 63, subp. FFFF, the Permittee shall monitor all valves at the intervals specified below and shall comply with all other provisions of 40 CFR Section 63.1025. 1) Monitoring method: The valves shall be monitored to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c). 2) Instrument reading that defines a leak: The instrument reading that defines a leak is 500 parts per million or greater. 3) Monitoring frequency: The Permittee shall monitor valves for leaks at the intervals specified in 40 CFR Section 63.1025(b)(3)(i)-(v) and shall keep the record specified 40 CFR Section 63.1025(b)(3)(vi).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(b); Minn. R. 7011.8050
Leak Detection, continued: 4) Valve subgrouping: For a process unit or a group of process units to which this subpart applies, the Permittee may choose to subdivide the valves in the applicable process unit or group of process units and apply the provisions of 40 CFR Section 63.1025(b)(3) to each subgroup. If the Permittee elects to subdivide the valves in the applicable process unit or group of process units, then the provisions of 40 CFR Section 63.1025(b)(4)(i)-(viii) apply. See Appendix B of this permit for specific formulas for calculating the overall performance of total valves (equations from 40 CFR Section 63.1025(b)).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(b); Minn. R. 7011.8050
Percent leaking valves calculation: 1) Calculation basis and procedures: i) The Permittee shall decide no later than Initial Startup of any unit in GP 001 whether to calculate percent leaking valves on a process unit or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis and this shall be the basis used for comparison with the subgrouping criteria specified 40 CFR Section 63.1025(b)(4)(i). ii) The percent leaking valves for each monitoring period for each process unit or valve subgroup, as provided 40 CFR Section 63.1025(b)(4), shall be calculated as specified in Appendix B of this permit.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050
Percent leaking valves calculation, continued: 2) Calculation for monitoring frequency: When determining monitoring frequency for each process unit or valve subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each process unit or valve subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050

Percent leaking valves calculation, continued: 3) Nonrepairable valves: i) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with item #ii below. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking valves calculation in a previous period) up to a maximum of 1 percent of the total number of valves in regulated material service at a process unit or affected facility may be excluded from calculation of percent leaking valves for subsequent monitoring periods. ii) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in regulated material service at a process unit or affected facility, the number of nonrepairable valves exceeding 1 percent of the total number of valves in regulated material service shall be included in the calculation of percent leaking valves.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(c); Minn. R. 7011.8050
Leak repair: 1) If a leak is determined pursuant to 40 CFR Section 63.1025(b), (e)(1), or (e)(2) , then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable. 2) After a leak has been repaired, the valve shall be monitored at least once within the first 3 months after its repair. The monitoring required by 40 CFR Section 63.1025(d) is in addition to the monitoring required to satisfy the definition of repaired and first attempt at repair. - The monitoring shall be conducted as specified in 40 CFR Section 63.1023(b) and (c), as appropriate, to determine whether the valve has resumed leaking.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(d); Minn. R. 7011.8050
Leak Repair, 2) continued: - Periodic monitoring required by 40 CFR Section 63.1025(b) may be used to satisfy this requirement, if the timing of the monitoring period coincides with the time specified in 40 CFR Section 63.1025(d). Alternatively, other monitoring may be performed to satisfy this requirement, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the time specified in 40 CFR Section 63.1025(d). - If a leak is detected by monitoring that is conducted pursuant to 40 CFR Section 63.1025(d)(2), the Permittee shall follow the provisions of 40 CFR Section 63.1025(d)(2)(iii)(A) and (B), to determine whether that valve must be counted as a leaking valve for purposes of 40 CFR Section 63.1025(c)(1)(ii).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(d); Minn. R. 7011.8050
Special provisions for valves: 1) Unsafe-to-monitor valves: Any valve that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor valve is exempt from the requirements of 40 CFR Section 63.1025(b) and (d)(2) and the Permittee shall monitor the valve according to the written plan specified in 40 CFR Section 63.1022(c)(4). 2) Difficult-to-monitor valves: Any valve that is designated, as described in 40 CFR Section 63.1022(c)(2), as a difficult-to-monitor valve is exempt from the requirements of 40 CFR Section 63.1025(b) and the Permittee shall monitor the valve according to the written plan specified in 40 CFR Section 63.1022(c)(4).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(e); Minn. R. 7011.8050
Special provisions for valves, continued: 3) Fewer than 250 valves: Any equipment located at a plant site with fewer than 250 valves in regulated material service is exempt from the requirements for monthly monitoring specified 40 CFR Section 63.1025(b)(3)(i). Instead, the Permittee shall monitor each valve in regulated material service for leaks once each quarter, as provided in 40 CFR Section 63.1025(e)(1) and (2).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1025(e); Minn. R. 7011.8050
D-2. Standards for Pumps in Light Liquid Service	hdr

Leak detection: Unless otherwise specified in 40 CFR Sections 63.1021(b), 63.1036, 63.1037, or 63.1026(e), the Permittee shall monitor each pump to detect leaks and shall comply with all other provisions 40 CFR Section 63.1026. 1) Monitoring method and frequency: The pumps shall be monitored monthly to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c). 2) Instrument reading that defines a leak: The instrument reading that defines a leak is specified as follows: - 5,000 parts per million or greater for pumps handling polymerizing monomers; - 2,000 parts per million or greater for pumps in food/medical service; and - 1,000 parts per million or greater for all other pumps. 3) Leak repair exception: For pumps to which a 1,000 parts per million leak definition applies, repair is not required unless an instrument reading of 2,000 parts per million or greater is detected.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(b); Minn. R. 7011.8050
Leak Detection, continued: 4) Visual inspection: Each pump shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal. The Permittee shall document that the inspection was conducted and the date of the inspection. If there are indications of liquids dripping from the pump seal at the time of the weekly inspection, the Permittee shall follow the procedure specified in either 40 CFR Section 63.1026(b)(4)(i) or (ii).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(b); Minn. R. 7011.8050
Percent leaking pumps calculation: 1) The Permittee shall decide no later than Initial Startup of any unit in GP 001 whether to calculate percent leaking pumps on a process unit basis or group of process units basis. Once the Permittee has decided, all subsequent percentage calculations shall be made on the same basis. 2) If, when calculated on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or three pumps in a process unit leak, the Permittee shall implement a quality improvement program for pumps that complies with the requirements of 40 CFR Section 63.1035. 3) The number of pumps at a process unit or affected facility shall be the sum of all the pumps in regulated material service, except that pumps found leaking in a continuous process unit or affected facility within 1 month after start-up of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(c); Minn. R. 7011.8050
Percent leaking pumps calculation, continued: 4) Percent leaking pumps shall be determined as specified in Appendix B of this permit.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(c); Minn. R. 7011.8050
Leak repair: If a leak is detected pursuant to 40 CFR Section 63.1026(b), then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable, unless otherwise specified in 40 CFR Section 63.1026(b)(5) for leaks identified by visual indications of liquids dripping.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(d); Minn. R. 7011.8050
Special provisions for pumps: 1) Dual mechanical seal pumps: Each pump equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR Section 63.1026(b), provided the requirements specified in 40 CFR Section 63.1026(e)(1)(i)-(viii) are met. (2) No external shaft: Any pump that is designed with no externally actuated shaft penetrating the pump housing is exempt from the requirements of 40 CFR Section 63.1026(b).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050
Special provisions for pumps, continued: 3) Routed to a process or fuel gas system or equipped with a closed vent system: Any pump that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pump to a control device meeting the requirements of 40 CFR Section 63.1034 of this part or 40 CFR Section 63.1021(b) is exempt from the requirements of 40 CFR Section 63.1026(b). 4) Unmanned plant site: Any pump that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR Section 63.1026(b)(4) and (e)(1)(v), and the daily requirements of 40 CFR Section 63.1026(e)(1)(vii), provided that each pump is visually inspected as often as practical and at least monthly.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050

Special provisions for pumps, continued: 5) 90 percent exemption: If more than 90 percent of the pumps at a process unit or affected facility meet the criteria in either 40 CFR Section 63.1026(e)(1) or (e)(2), the process unit or affected facility is exempt from the percent leaking calculation 40 CFR Section 63.1026(c). 6) Unsafe-to-monitor pumps: Any pump that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor pump is exempt from the requirements of 40 CFR Section 63.1026(b), the monitoring and inspection requirements of 40 CFR Section 63.1026(e)(1)(v)-(viii), and the Permittee shall monitor and inspect the pump according to the written plan specified in 40 CFR Section 63.1022(c)(4).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1026(e); Minn. R. 7011.8050
D-3. Standards for Connectors in Gas and Vapor Service and in Light Liquid Service	hdr
Compliance schedule: The Permittee shall monitor all connectors in each process unit initially for leaks by 12 months after initial startup of any unit in GP 001. If all connectors in each process unit have been monitored for leaks prior to this date specified in the referencing subpart, no initial monitoring is required provided either no process changes have been made since the monitoring or the Permittee can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the Permittee is required to monitor only those connectors involved in the process change.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(a); Minn. R. 7011.8050
Leak detection: Except as allowed in 40 CFR Sections 63.1021(b), 63.1036, 63.1037, or 63.1027(e), the Permittee shall monitor all connectors in gas and vapor and light liquid service as specified in 40 CFR Section 63.1027(a) and (b)(3). 1) Monitoring method: The connectors shall be monitored to detect leaks by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c). 2) Instrument reading that defines a leak: If an instrument reading greater than or equal to 500 parts per million is measured, a leak is detected.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(b); Minn. R. 7011.8050
Leak detection, continued: 3) Monitoring periods: The Permittee shall perform monitoring, subsequent to the initial monitoring required 40 CFR Section 63.1027(a), as specified in 40 CFR Section 63.1027(b)(3)(i)-(iii), and shall comply with the requirements of 40 CFR Section 63.1027(b)(3)(iv) and (v). The required period in which monitoring must be conducted shall be determined from 40 CFR Section 63.1027(b)(3)(i)-(iii) using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified 40 CFR Section 63.1027(c).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(b); Minn. R. 7011.8050
Percent leaking connectors calculation: For use in determining the monitoring frequency, as specified in 40 CFR Section 63.1027(a) and (b)(3), the percent leaking connectors as used in 40 CFR Section 63.1027(a) and (b)(3) shall be calculated as specified in Appendix B of this permit.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(c); Minn. R. 7011.8050
Leak repair: If a leak is detected pursuant to 40 CFR Section 63.1027(a) and (b) , then the leak shall be repaired using the procedures in 40 CFR Section 63.1024, as applicable.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(d); Minn. R. 7011.8050
Special provisions for connectors: 1) Unsafe-to-monitor connectors: Any connector that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor connector is exempt from the requirements of 40 CFR Section 63.1027(a) and (b) and the Permittee shall monitor according to the written plan specified in 40 CFR Section 63.1022(c)(4).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(e); Minn. R. 7011.8050
Special provisions for connectors, continued: 2) Inaccessible, ceramic, or ceramic-lined connectors: i) Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of 40 CFR Section 63.1027(a) and (b), from the leak repair requirements of 40 CFR Section 63.1027(d), and from the recordkeeping and reporting requirements of 40 CFR Section 40 CFR Sections 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in 40 CFR Section 63.1027(e)(2)(i)(A)-(F), as applicable. ii) If any inaccessible, ceramic or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1027(e); Minn. R. 7011.8050
D-4. Standards for Agitators in Gas and Vapor Service and in Light Liquid Service	hdr

Leak detection: 1) Monitoring method: Each agitator seal shall be monitored monthly to detect leaks by the methods specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c), except as provided in 40 CFR Sections 63.1021(b), 63.1036, 63.1037, or 63.1028(e). 2) Instrument reading that defines a leak: If an instrument reading equivalent of 10,000 parts per million or greater is measured, a leak is detected. 3) Visual inspection: (i) Each agitator seal shall be checked by visual inspection each calendar week for indications of liquids dripping from the agitator seal. The Permittee shall document that the inspection was conducted and the date of the inspection. (ii) If there are indications of liquids dripping from the agitator seal, the Permittee shall follow the procedures specified in 40 CFR Section 63.1028(c)(3)(ii)(A) or (B) prior to the next required inspection.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(c); Minn. R. 7011.8050
Leak repair: If a leak is detected, then the leak shall be repaired using the procedures in 40 CFR Section 63.1024.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(d); Minn. R. 7011.8050
Special provisions for agitators: 1) Dual mechanical seal: Each agitator equipped with a dual mechanical seal system that includes a barrier fluid system is exempt from the requirements of 40 CFR Section 63.1028(c), provided the requirements specified in 40 CFR Section 63.1028(e)(1)(i)-(vi) are met. 2) No external shaft: Any agitator that is designed with no externally actuated shaft penetrating the agitator housing is exempt from 40 CFR Section 63.1028(c). 3) Routed to a process or fuel gas system or equipped with a closed vent system: Any agitator that is routed to a process or fuel gas system that captures and transports leakage from the agitator to a control device meeting the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b) is exempt from the requirements of 40 CFR Section 63.1028(c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050
Special provisions for agitators, continued: 4) Unmanned plant site: Any agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of 40 CFR Section 63.1028(c)(3) and (e)(1)(iv), and the daily requirements of 40 CFR Section 63.1028(e)(1)(v), provided that each agitator is visually inspected as often as practical and at least monthly. 5) Difficult-to-monitor agitator seals: Any agitator seal that is designated, as described in 40 CFR Section 63.1022(c)(2), as a difficult-to-monitor agitator seal is exempt from the requirements of 40 CFR Section 63.1028(c) and the Permittee shall monitor the agitator seal according to the written plan specified in 40 CFR Section 63.1022(c)(4). 6) Equipment obstructions: Any agitator seal that is obstructed by equipment or piping that prevents access to the agitator by a monitor probe is exempt from the monitoring requirements 40 CFR Section 63.1028(c).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050
Special provisions for agitators, continued: 7) Unsafe-to-monitor agitator seals: Any agitator seal that is designated, as described in 40 CFR Section 63.1022(c)(1), as an unsafe-to-monitor agitator seal is exempt from the requirements of 40 CFR Section 63.1028(c) and the Permittee of the agitator seal monitors the agitator seal according to the written plan specified in 40 CFR Section 63.1022(c)(4).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1028(e); Minn. R. 7011.8050
D-5. Standards for Pumps, Valves, Connectors, and Agitators in Heavy Liquid Service; Pressure Relief Devices in Liquid Service; and Instrumentation Systems	hdr
Leak detection: 1) Monitoring method: Unless otherwise specified in 40 CFR Sections 63.1021(b), 63.1036, or 63.1037, the Permittee shall comply with 40 CFR Section 63.1029(b)(1) and (2). Pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in light liquid or heavy liquid service; and instrumentation systems shall be monitored within 5 calendar days by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c), if evidence of a potential leak to the atmosphere is found by visual, audible, olfactory, or any other detection method, unless the potential leak is repaired as required 40 CFR Section 63.1029(c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1029(b); Minn. R. 7011.8050

Leak detection, continued: 2) Instrument reading that defines a leak: If an instrument reading of 10,000 parts per million or greater for agitators, 5,000 parts per million or greater for pumps handling polymerizing monomers, 2,000 parts per million or greater for pumps in food and medical service, or 2,000 parts per million or greater for all other pumps (including pumps in food/medical service), or 500 parts per million or greater for valves, connectors, instrumentation systems, and pressure relief devices is measured pursuant to 40 CFR Section 63.1029(b)(1), a leak is detected and shall be repaired pursuant to 40 CFR Section 63.1024, as applicable.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1029(b); Minn. R. 7011.8050
Leak repair: For equipment identified 40 CFR Section 63.1029(b) that is not monitored by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c), repaired shall mean that the visual, audible, olfactory, or other indications of a leak to the atmosphere have been eliminated; that no bubbles are observed at potential leak sites during a leak check using soap solution; or that the system will hold a test pressure.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1029(c); Minn. R. 7011.8050
D-6. Standards for Pressure Relief Devices in Gas and Vapor Service	hdr
Compliance standard: Except during pressure releases as provided for 40 CFR Section 63.1029(c), or as otherwise specified in 40 CFR Sections 63.1036, 63.1037, or 40 CFR Section 63.1029(d) and (e), each pressure relief device in gas and vapor service shall be operated with an instrument reading of less than 500 parts per million as measured by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(b); Minn. R. 7011.8050
Pressure relief requirements: 1) After each pressure release, the pressure relief device shall be returned to a condition indicated by an instrument reading of less than 500 parts per million, as soon as practical, but no later than 5 calendar days after each pressure release, except as provided in 40 CFR Section 63.1024(d). 2) The pressure relief device shall be monitored no later than five calendar days after the pressure to confirm the condition indicated by an instrument reading of less than 500 parts per million above background, as measured by the method specified in 40 CFR Section 63.1023(b) and, as applicable, 40 CFR Section 63.1023(c). 3) The Permittee shall record the dates and results of the monitoring required by 40 CFR Section 63.1030(c)(2) following a pressure release including the background level measured and the maximum instrument reading measured during the monitoring.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(c); Minn. R. 7011.8050
Pressure relief devices routed to a process or fuel gas system or equipped with a closed vent system and control device: Any pressure relief device that is routed to a process or fuel gas system or equipped with a closed vent system capable of capturing and transporting leakage from the pressure relief device to a control device meeting the requirements of 40 CFR Section 63.1034 is exempt from the requirements of 40 CFR Section 63.1030(b) and (c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(d); Minn. R. 7011.8050
Rupture disk exemption: Any pressure relief device that is equipped with a rupture disk upstream of the pressure relief device is exempt from the requirements of 40 CFR Section 63.1030(b) and (c) provided the Permittee installs a replacement rupture disk upstream of the pressure relief device as soon as practical after each pressure release but no later than 5 calendar days after each pressure release, except as provided in 40 CFR Section 63.1024(d).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1030(e); Minn. R. 7011.8050
D-7. Standards for Sampling Connection Systems	hdr
The Permittee shall comply with 40 CFR Section 63.1032 no later than initial startup of any unit in GP 002.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1032(a); Minn. R. 7011.8050
Equipment requirement: Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed vent system, except as provided in 40 CFR Section 40 CFR Sections 63.1021(b), 63.1036, 63.1037, or 63.1032(d). Gases displaced during filling of the sample container are not required to be collected or captured.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1032(b); Minn. R. 7011.8050

Equipment design and operation: Each closed-purge, closed-loop, or closed vent system as required 40 CFR Section 63.1032(b) shall meet the following applicable requirements: 1) The system shall return the purged process fluid directly to a process line or to a fuel gas system that meets the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b); or 2) Be designed and operated to capture and transport all the purged process fluid to a control device that meets the requirements of either 40 CFR Section 63.1034 or 40 CFR Section 63.1021(b); or 3) Collect, store, and transport the purged process fluid to a system or facility identified 40 CFR Section 63.1032(c)(4)(i), (ii), or (iii). 4) Containers that are part of a closed purge system must be covered or closed when not being filled or emptied.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR pt. 63, subp. UU; 40 CFR Section 63.1032(c); Minn. R. 7011.8050
D-8. Standards for Open-ended Valves or Lines	hdr
The Permittee shall comply with 40 CFR Section 63.1033 no later than initial start-up of any unit in GP 002.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(a); Minn. R. 7011.8050
Equipment and operational requirements: 1) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 CFR Sections 63.1021(b), 63.1036, 63.1037, and 63.1033(c) and (d). The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance. 2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed. 3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with 40 CFR Section 63.1033(b)(1) at all other times.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(b); Minn. R. 7011.8050
Emergency shutdown exemption: Open-ended valves or lines in an emergency shutdown system that are designed to open automatically in the event of a process upset are exempt from the requirements of 40 CFR Section 63.1033(b).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1033(c); Minn. R. 7011.8050
E. QUALITY IMPROVEMENT PROGRAM (QIP) FOR PUMPS	hdr
Criteria: If, on a 6-month rolling average, at least the greater of either 10 percent of the pumps in a process unit or affected facility (or plant site) or three pumps in a process unit or affected facility (or plant site) leak, the Permittee shall comply with the following requirements: 1) Pumps that are in food and medical service or in polymerizing monomer service shall comply with all requirements except for those specified 40 CFR Section 63.1035(d)(8). 2) Pumps that are not in food and medical or polymerizing monomer service shall comply with all of the requirements 40 CFR Section 63.1035.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(a); Minn. R. 7011.8050
Exiting the QIP: The Permittee shall comply with the requirements 40 CFR Section 63.1035 until the number of leaking pumps is less than the greater of either 10 percent of the pumps or three pumps, calculated as a 6-month rolling average, in the process unit or affected facility (or plant site). Once the performance level is achieved, the Permittee shall comply with the requirements in 40 CFR Section 63.1026.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(b); Minn. R. 7011.8050
Resumption of QIP: If, in a subsequent monitoring period, the process unit or affected facility (or plant site) has greater than either 10 percent of the pumps leaking or three pumps leaking (calculated as a 6-month rolling average), the Permittee shall resume the quality improvement program starting at performance trials.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(c); Minn. R. 7011.8050
QIP requirements: The quality improvement program shall meet the requirements specified in 40 CFR Section 63.1035(d)(1)-(8) as detailed in Appendix C of this permit.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(d); Minn. R. 7011.8050

QIP recordkeeping: In addition to the records required by 40 CFR Section 63.1035(d)(2), the Permittee shall maintain records specified below for the period of the quality improvement program for the process unit or affected facility. 1) When using a pump quality improvement program as specified in 40 CFR Section 63.1035, record the following information: i) The rolling average percent leaking pumps. ii) Documentation of all inspections conducted under the requirements of 40 CFR Section 63.1035(d)(4), and any recommendations for design or specification changes to reduce leak frequency. iii) The beginning and ending dates while meeting the requirements of 40 CFR Section 63.1035(d). 2) If a leak is not repaired within 15 calendar days after discovery of the leak, the reason for the delay and the expected date of successful repair.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050
QIP recordkeeping, continued: 3) Records of all analyses required in 40 CFR Section 63.1035(d). The records will include the following information: i) A list identifying areas associated with poorer than average performance and the associated service characteristics of the stream, the operating conditions and maintenance practices. ii) The reasons for rejecting specific candidate superior emission performing pump technology from performance trials. iii) The list of candidate superior emission performing valve or pump technologies, and documentation of the performance trial program items required under 40 CFR Section 63.1035(d)(6)(iii). iv) The beginning date and duration of performance trials of each candidate superior emission performing technology.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050
QIP recordkeeping, continued: 4) All records documenting the quality assurance program for pumps as specified 40 CFR Section 63.1035(d)(7), including records indicating that all pumps replaced or modified during the period of the quality improvement program are in compliance with the quality assurance. 5) Records documenting compliance with the 20 percent or greater annual replacement rate for pumps as specified 40 CFR Section 63.1035(d)(8). 6) Information and data to show the corporation has fewer than 100 employees, including employees providing professional and technical contracted services.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1035(e); Minn. R. 7011.8050
F. HEAT EXCHANGER REQUIREMENTS	hdr
The Permittee must meet each requirement in Table 10 to 40 CFR pt. 63, subp. FFFF that applies to heat exchanger systems except as specified as follows: 1) The phrase a chemical manufacturing process unit meeting the conditions of 40 CFR Section 63.100 (b)(1) through (b)(3) of this section in 40 CFR Section 63.104(a) means an MCPU meeting the conditions of 40 CFR Section 63.2435 for the purposes of 40 CFR pt. 63, subp. FFFF. 2) The reference to 40 CFR Section 63.100(c) in 40 CFR Section 63.104(a) does not apply for the purposes of 40 CFR pt. 63, subp. FFFF.	40 CFR Section 63.2490(a); Minn. R. 7011.8050
Heat exchange system exemption: Unless one or more of the conditions specified in below (1 through 6) are met, the Permittee shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of 40 CFR Section 63.100(b)(1)-(3), except for chemical manufacturing process units meeting the condition specified in 40 CFR Section 63.100(c), according to the provisions in either 40 CFR Section 63.104(b) or (c). Whenever a leak is detected, the Permittee shall comply with the requirements 40 CFR Section 63.104(d). 1) The heat exchange system is operated with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050

Heat exchange system exemption, continued: 2) There is an intervening cooling fluid, containing less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart, between the process and the cooling water. This intervening fluid serves to isolate the cooling water from the process fluid and the intervening fluid is not sent through a cooling tower or discharged. For purposes of 40 CFR Section 63.104, discharge does not include emptying for maintenance purposes. 3) The once-through heat exchange system is subject to a National Pollution Discharge Elimination System (NPDES) permit with an allowable discharge limit of 1 part per million or less above influent concentration or 10 percent or less above influent concentration, whichever is greater.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050
Heat exchange system exemption, continued: 4) The once-through heat exchange system is subject to an NPDES permit that: i) Requires monitoring of a parameter(s) or condition(s) to detect a leak of process fluids into cooling water; ii) Specifies or includes the normal range of the parameter or condition; iii) Requires monitoring for the parameters selected as leak indicators no less frequently than monthly for the first six months and quarterly thereafter; and iv) Requires the Permittee to report and correct leaks to the cooling water when the parameter or condition exceeds the normal range. 5) The recirculating heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 4 of this subpart. 6) The once-through heat exchange system is used to cool process fluids that contain less than 5 percent by weight of total hazardous air pollutants listed in table 9 of 40 CFR pt. 63, subp. G.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(a); Minn. R. 7011.8050
Heat Exchanger Monitoring: The Permittee shall monitor the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak by complying with items (1)-(6) below. The cooling water shall be monitored for methanol, which will indicate the presence of a leak in the heat exchange system. 1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks. 2) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of this subpart.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050
Heat Exchanger Monitoring, continued: 3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed in part 136 of this chapter as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator. 4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers. i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050
Heat Exchanger Monitoring, continued: ii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers. 5) A minimum of three sets of samples shall be taken at each entrance and exit as defined 40 CFR Section 63.104(b)(4). The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050

Heat Exchanger Monitoring, continued: 6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(b); Minn. R. 7011.8050
Heat Exchanger Leak Detection and Repair: If a leak is detected according to the criteria of 40 CFR Section 63.104(b) or (c), the Permittee shall comply with the following requirements, except as provided 40 CFR Section 63.104(e). 1) The leak shall be repaired as soon as practical but not later than 45 calendar days after the Permittee receives results of monitoring tests indicating a leak. The leak shall be repaired unless the Permittee demonstrates that the results are due to a condition other than a leak. 2) Once the leak has been repaired, the Permittee shall confirm that the heat exchange system has been repaired within 7 calendar days of the repair or startup, whichever is later.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(d); Minn. R. 7011.8050
Heat Exchanger Delay of Leak Repair: Delay of repair of heat exchange systems for which leaks have been detected is allowed if the equipment is isolated from the process. Delay of repair is also allowed if repair is technically infeasible without a shutdown and any one of the following conditions is met. All such time periods shall be determined from the date when the Permittee determines that delay of repair is necessary. 1) If a shutdown is expected within the next 2 months, a special shutdown before that planned shutdown is not required. 2) If a shutdown is not expected within the next 2 months, the Permittee may delay repair as provided below). Documentation of a decision to delay repair shall state the reasons repair was delayed and shall specify a schedule for completing the repair as soon as practical.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(e); Minn. R. 7011.8050
Heat Exchanger Delay of Leak Repair, continued: i) If a shutdown for repair would cause greater emissions than the potential emissions from delaying repair, the Permittee may delay repair until the next shutdown of the process equipment associated with the leaking heat exchanger. The Permittee shall document the basis for the determination that a shutdown for repair would cause greater emissions than the emissions likely to result from delaying repair as specified in 40 CFR Section 63.104(e)(2)(i)(A) and (B). ii) If repair is delayed for reasons other than those specified in item (2)(i) above, the Permittee may delay repair up to a maximum of 120 calendar days. The Permittee shall demonstrate that the necessary parts or personnel were not available.	CONTINUED: Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(e); Minn. R. 7011.8050
Heat Exchanger Recordkeeping: The Permittee shall retain the following records: i) Monitoring data required by 40 CFR Section 63.104 indicating a leak and the date when the leak was detected, and if demonstrated not to be a leak, the basis for that determination; ii) Records of any leaks detected by procedures subject to 40 CFR Section 63.103(c)(2) and the date the leak was discovered; iii) The dates of efforts to repair leaks; and iv) The method or procedure used to confirm repair of a leak and the date repair was confirmed.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a), 63.104(f)(1), and 63.103(c)(1); Minn. R. 7011.8050
Record Format and Retention: The Permittee shall retain records in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provides access within 2 hours after a request. The remaining four and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on paper, microfilm, computer, floppy disk, magnetic tape, or microfiche.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a), 63.104(f), and 63.103(c)(1); Minn. R. 7011.8050

Reporting: If the Permittee invokes the delay of repair provisions for a heat exchange system, the following information shall be submitted in the next Semiannual Compliance Report. If the leak remains unrepaired, the information shall also be submitted in each subsequent report, until repair of the leak is reported. i) The Permittee shall report the presence of the leak and the date that the leak was detected. ii) The Permittee shall report whether or not the leak has been repaired. iii) The Permittee shall report the reason(s) for delay of repair. If delay of repair is invoked due to the reasons described 40 CFR Section 63.104(e)(2), documentation of emissions estimates must also be submitted. iv) If the leak remains unrepaired, the Permittee shall report the expected date of repair. v) If the leak is repaired, the Permittee shall report the date the leak was successfully repaired.	Table 10 of 40 CFR pt 63, subp. FFFF; 40 CFR Sections 63.2490(a) and 63.104(f)(2); Minn. R. 7011.8050
G. RECORDKEEPING	hdr
Recordkeeping system: The Permittee of more than one regulated source subject to the provisions of this subpart may comply with the recordkeeping requirements for these regulated sources in one recordkeeping system. The recordkeeping system shall identify each record by regulated source and the type of program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(a); Minn. R. 7011.8050
General equipment leak records: 1) As specified in 40 CFR Section 63.1022(a) and (b), the Permittee shall keep general and specific equipment identification if the equipment is not physically tagged and the Permittee is electing to identify the equipment subject to this subpart through written documentation such as a log or other designation. 2) The Permittee shall keep a written plan as specified in 40 CFR Section 63.1022(c)(4) for any equipment that is designated as unsafe- or difficult-to-monitor. 3) The Permittee shall maintain a record of the identity and an explanation as specified in 40 CFR Section 63.1022(d)(2) for any equipment that is designated as unsafe-to-repair.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(b); Minn. R. 7011.8050
General equipment leak records, continued: 4) As specified in 40 CFR Section 63.1022(e), the Permittee shall maintain the identity of compressors operating with an instrument reading of less than 500 parts per million. 5) The Permittee shall keep records associated with the determination that equipment is in heavy liquid service as specified in 40 CFR Section 63.1022(f). 6) The Permittee shall keep records for leaking equipment as specified in 40 CFR Section 63.1023(e)(2). 7) The Permittee shall keep records for leak repair as specified in 40 CFR Section 63.1024(f) and records for delay of repair as specified in 40 CFR Section 63.1024(d).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(b); Minn. R. 7011.8050
Valve Records: For valves, the Permittee shall maintain the following records: i) The monitoring schedule for each process unit as specified in 40 CFR Section 63.1025(b)(3)(vi). ii) The valve subgrouping records specified in 40 CFR Section 63.1025(b)(4)(iv), if applicable.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(1); Minn. R. 7011.8050
Pump Records: For pumps, the Permittee shall maintain the following records: i) Documentation of pump visual inspections as specified in 40 CFR Section 63.1026(b)(4). ii) Documentation of dual mechanical seal pump visual inspections as specified in 40 CFR Section 63.1026(e)(1)(v). iii) For the criteria as to the presence and frequency of drips for dual mechanical seal pumps, records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1026(e)(1)(i).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(2); Minn. R. 7011.8050
Connector Records: For connectors, the Permittee shall maintain the monitoring schedule for each process unit as specified in 40 CFR Section 63.1027(b)(3)(v).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(3); Minn. R. 7011.8050
Agitator Records: For agitators, the Permittee shall maintain the following records: i) Documentation of agitator seal visual inspections as specified in 40 CFR Section 63.1028; and ii) For the criteria as to the presence and frequency of drips for agitators, the Permittee shall keep records of the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1028(e)(1)(vi).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(4); Minn. R. 7011.8050

Pressure Relief Device Records: For pressure relief devices in gas and vapor or light liquid service, the Permittee shall keep records of the dates and results of monitoring following a pressure release, as specified in 40 CFR Section 63.1030(c)(3).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(5); Minn. R. 7011.8050
Compressor Records: For compressors, the Permittee shall maintain the following records: i) For criteria as to failure of the seal system and/or the barrier fluid system, record the design criteria and explanations and any changes and the reason for the changes, as specified in 40 CFR Section 63.1031(d)(2). ii) For compressors operating under the alternative compressor standard, record the dates and results of each compliance test as specified in 40 CFR Section 63.1031(f)(2).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(6); Minn. R. 7011.8050
Pump QIP Records: For a pump QIP program, the Permittee shall maintain the following records specified: i) Individual pump records as specified in 40 CFR Section 63.1035(d)(2). ii) Trial evaluation program documentation as specified in 40 CFR Section 63.1035(d)(6)(iii). iii) Engineering evaluation documenting the basis for judgment that superior emission performance technology is not applicable as specified in 40 CFR Section 63.1035(d)(6)(vi). iv) Quality assurance program documentation as specified in 40 CFR Section 63.1035(d)(7). v) QIP records as specified in 40 CFR Section 63.1035(e).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(7); Minn. R. 7011.8050
Batch Process Records: For process units complying with the batch process unit alternative, the Permittee shall maintain the following records: i) Pressure test records as specified in 40 CFR Section 63.1036(b)(7). ii) Records for equipment added to the process unit as specified in 40 CFR Section 63.1036(d).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(8); Minn. R. 7011.8050
Enclosed-Vented Process Records: For process units complying with the enclosed-vented process unit alternative, the Permittee shall maintain the records for enclosed-vented process units as specified in 40 CFR Section 63.1037(b).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1038(c)(9); Minn. R. 7011.8050
H. REPORTING	hdr
Notification of Compliance Status: In addition to the information specified at GP 002 of this permit, the Notification of Compliance Status listed in Table B of this permit (for GP 002), this report shall contain the following information, as applicable. 1) The notification shall provide the following information for each process unit described by FS 003: i) Process unit or affected facility identification. ii) Number of each equipment type (e.g., valves, pumps) excluding equipment in vacuum service. iii) Method of compliance with the standard (e.g., monthly leak detection and repair or equipped with dual mechanical seals). iv) Planned schedule for requirements in 40 CFR Section 63.1025 and 63.1026.	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(a); Minn. R. 7011.8050
Notification of Compliance Status, continued: 2) The notification shall provide the following information each process unit or affected facility subject to the requirements of 40 CFR Section 63.1036(b): i) Batch products or product codes subject to the provisions of this subpart, and ii) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this subpart. 3) The notification shall provide the following information for each process unit or affected facility subject to the requirements in 40 CFR Section 63.1037: i) Process unit or affected facility identification. ii) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of 40 CFR Section 63.1034 of this part.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(a); Minn. R. 7011.8050
Semiannual Compliance Report: In addition to the information specified at GP 002 of this permit, the Permittee shall report the information specified below in the Semiannual Compliance Report listed in Table B of this permit (for GP 002): 1) For the equipment specified below, report in a summary format by equipment type, the number of components for which leaks were detected and for valves, pumps and connectors show the percent leakers, and the total number of components monitored. Also include the number of leaking components that were not repaired as required by 40 CFR Section 63.1024, and for valves and connectors, identify the number of components that are determined by 40 CFR Section 63.1025(c)(3) to be nonrepairable. i) Valves in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1025(b) and (c). ii) Pumps in light liquid service pursuant to 40 CFR Section 63.1026(b) and (c).	Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050

Facility Name: Northstar Agri Industries - Hallock

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Semiannual Compliance Report, continued: iii) Connectors in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1027(b) and (c). iv) Agitators in gas and vapor service and in light liquid service pursuant to 40 CFR Section 63.1028(c). v) Compressors pursuant to 40 CFR Section 63.1031(d). 2) Where any delay of repair is utilized pursuant to 40 CFR Section 63.1024(d), report that delay of repair has occurred and report the number of instances of delay of repair. 3) If applicable, report the valve subgrouping information specified in 40 CFR Section 63.1025(b)(4)(iv).	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050
Semiannual Compliance Report, continued: 4) For pressure relief devices in gas and vapor service pursuant to 40 CFR Section 63.1030(b) and for compressors pursuant to 40 CFR Section 63.1031(f) that are to be operated at a leak detection instrument reading of less than 500 parts per million, report the results of all monitoring to show compliance conducted within the semiannual reporting period. 5) Report, if applicable, the initiation of a monthly monitoring program for valves pursuant to 40 CFR Section 63.1025(b)(3)(i). 6) Report, if applicable, the initiation of a quality improvement program for pumps pursuant to 40 CFR Section 63.1035.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050
Semiannual Compliance Report, continued: 7) Where the alternative means of emissions limitation for batch processes is utilized, report the information listed in 40 CFR Section 63.1036(f). 8) Report the information listed 40 CFR Section 63.1039(a) for the Notification of Compliance Status Report for process units or affected facilities with later compliance dates. Report any revisions to items reported in an earlier Notification of Compliance Status Report if the method of compliance has changed since the last report.	CONTINUED: Table 6 of 40 CFR pt. 63, subp. FFFF; 40 CFR Sections 63.2480(a) and 63.1039(b); Minn. R. 7011.8050
I. OTHER APPLICABLE REQUIREMENTS	hdr
FS 003 is an affected facility under 40 CFR pt. 60, subp. VV; however, as allowed under 40 CFR Section 63.2535(k), the Permittee has elected to comply with 40 CFR pt. 60, subp. VV by complying with 40 CFR pt. 63, subp. FFFF for this equipment. The Permittee must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with 40 CFR pt. 63, subp. FFFF, as if they were organic HAP.	40 CFR pt. 60, subp. VV; 40 CFR Section 63.2535(k); Minn. R. 7011.2900(A) and 7011.8050

TABLE B: SUBMITTALS

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

Also, where required by an applicable rule or permit condition, send to the Permit Technical Advisor notices of:
- accumulated insignificant activities,
- installation of control equipment,
- replacement of an emissions unit, and
- changes that contravene a permit term.

Send submittals that are required to be submitted to the U.S. EPA regional office to:

Mr. George Czerniak
Air and Radiation Branch
EPA Region V
77 West Jackson Boulevard
Chicago, Illinois 60604

Each submittal must be postmarked or received by the date specified in the applicable Table. Those submittals required by parts 7007.0100 to 7007.1850 must be certified by a responsible official, defined in Minn. R. 7007.0100, subp. 21. Other submittals shall be certified as appropriate if certification is required by an applicable rule or permit condition.

Send submittals that are required by the Acid Rain Program to:

U.S. Environmental Protection Agency
Clean Air Markets Division
1200 Pennsylvania Avenue NW (6204N)
Washington, D.C. 20460

Send any application for a permit or permit amendment to:

AQ Permit Technical Advisor
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Table B lists most of the submittals required by this permit. Please note that some submittal requirements may appear in Table A or, if applicable, within a compliance schedule located in Table C. Table B is divided into two sections in order to separately list one-time only and recurrent submittal requirements.

Unless another person is identified in the applicable Table, send all other submittals to:

AQ Compliance Tracking Coordinator
Industrial Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

TABLE B: ONE TIME SUBMITTALS OR NOTIFICATIONS

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

What to send	When to send	Portion of Facility Affected
Application for Permit Reissuance	due 180 days before expiration of Existing Permit	Total Facility
Compliance Status Report	due 60 days after Initial Performance Test to measure Carbon Monoxide emissions. The Compliance Status Report shall include the information required in 40 CFR Section 63.9(h), as applicable.	GP003
Compliance Status Report	due 60 days after Initial Startup of the boiler (EU 004). The Compliance Status Report shall include the information required in 40 CFR Section 63.9(h), as applicable.	EU004
Computer Dispersion Modeling Information	due 540 days after permit issuance . Submit modeling data as specified in MPCA guidance for Modeling Information Requests. This modeling information is for data collection purposes, no modeling analysis is required at this time. This is a state only requirement and is not enforceable by the EPA Administrator or citizens under the Clean Air Act.	Total Facility
Notification of compliance status	due 150 days after Initial Startup of any unit in GP 002. The Notification of Compliance Status shall contain the information specified in Table A of this permit, under GP 002.	GP002
Notification of compliance status	due 600 days after Initial Startup (20 calendar months) or within 60 days after determining the initial 12 operating months compliance ratio. The notification shall contain the information specified in Table A of this permit, under GP 001.	GP001
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup	EU001, EU002
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of any unit in GP 001. This notification shall state whether or not the Permittee has elected to operate under an initial startup period subject to 40 CFR Section 63.2850(c)(2) and shall provide an estimate and justification for the anticipated duration of the initial startup period.	GP001
Notification of the Actual Date of Initial Startup	due 15 days after Initial Startup of any unit in GP 002. This notification shall state whether or not the Permittee has elected to operate under an initial startup period subject to 40 CFR Section 63.2850(c)(2) and shall provide an estimate and justification for the anticipated duration of the initial startup period.	GP002
Notification of the Date Construction Began	due 30 days after Start Of Construction. Submit the name and number of the unit and the date construction began. Also include the following information: 1) The design heat capacity and identification of fuels to be combusted in the unit 2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor of any fuel or mixture of fuels under 40 CFR Sections 60.42c or 60.43c 3) The annual capacity factor at which the Permittee anticipates operating the unit based on all fuels fired and based on each individual fuel fired.	EU001, EU002
Testing Frequency Plan	due 60 days after Initial Performance Test. The plan will address all of the tested units. The plan shall specify a testing frequency based on the test data and MPCA guidance. Future performance tests based on one-year (12 month), 36 month, and 60 month intervals, or as applicable, shall be required upon written approval of the MPCA.	Total Facility

TABLE B: RECURRENT SUBMITTALS

Facility Name: Northstar Agri Industries - Hallock

Permit Number: 06900025 - 002

What to send	When to send	Portion of Facility Affected
Semiannual Deviations Report	due 30 days after end of each calendar half-year following permit issuance . The first semiannual report submitted by the Permittee shall cover the calendar half-year in which the permit is issued. The first report of each calendar year covers January 1 - June 30. The second report of each calendar year covers July 1 - December 31. If no deviations have occurred, the Permittee shall submit the report stating no deviations.	Total Facility
Compliance Certification	due 31 days after end of each calendar year following permit issuance (for the previous calendar year). The Permittee shall submit this on a form approved by the Commissioner, both to the Commissioner and to the US EPA regional office in Chicago. This report covers all deviations experienced during the calendar year.	Total Facility
Compliance Certification	due before end of each year following Notification of compliance status ("year" is any 12 calendar months, not necessarily Jan-Dec.). Each annual compliance certification is due 12 calendar months after the previous annual compliance certification. The annual compliance certification provides the compliance status for each operating month during the 12 calendar months period ending 60 days prior to the date on which the report is due. The Certification shall contain the information specified in Table A of this permit, under GP 001.	GP001
Semiannual Compliance Report	due 243 days after end of each calendar year following Initial Startup (due every August 31) of any unit in GP 002. The Semiannual Compliance Report shall contain the information specified in Table A of this permit, under GP 002, and covers the semiannual reporting period from January 1 through June 30.	GP002
Semiannual Compliance Report	due 59 days after end of each calendar year following Initial Startup (due every February 28) of any unit in GP 002. The Semiannual Compliance Report shall contain the information specified in Table A of this permit, under GP 002, and covers the semiannual reporting period from July 1 through December 31.	GP002

APPENDIX A
40 CFR pt. 63, subp. GGGG Equations
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Equation 1A:

40 CFR § 63.2840
Compliance Ratio: The compliance ratio for total solvent loss is calculated by using the following equation:

$$Compliance\ Ratio = \frac{f * Actual\ Solvent\ Loss}{0.64 * \sum_{i=1}^{n} (Oilseed)_i * (SLF)_i}$$

Equation 1A

Where:

f = The weighted average volume fraction of HAP in solvent received during the previous 12 operating months, as determined in accordance with 40 CFR § 63.2854, dimensionless.

0.64 = The average volume fraction of HAP in solvent in the baseline performance data, dimensionless.

Actual Solvent Loss = Gallons of actual solvent loss during previous 12 operating months, as determined in accordance with 40 CFR § 63.2853.

Oilseed = Tons of each oilseed type "i" processed during the previous 12 operating months, as shown in 40 CFR § 63.2855.

SLF = The corresponding solvent loss factor (gal/ton) for oilseed "i" listed in Table 1 of 40 CFR § 63.2840 (0.3 rapeseed (canola) for new sources).

Equation 2A:

40 CFR § 63.2853
Monthly Actual Solvent Loss -- By the end of each calendar month following an operating month, calculate the actual extraction solvent loss during the previous operating month. The monthly actual extraction solvent loss is to be determined as follows:

$$Monthly\ Actual\ Solvent\ (gal) = \sum_{i}^{n} (SOLV_B - SOLV_E - SOLV_R - SOLV_A)_i$$

Equation 2A

Where:

$SOLV_B$ = Gallons of solvent in the inventory at the beginning of normal operating period "i" as determined in accordance with 40 CFR § 63.2853(a)(3).

$SOLV_E$ = Gallons of solvent in the inventory at the end of normal operating period "i" as determined in accordance with 40 CFR § 63.2853(a)(3).

$SOLV_R$ = Gallons of solvent received between the beginning and ending inventory dates of normal operating period "i" as determined in accordance with 40 CFR § 63.2853(a)(4). This includes

purchased hexane and hexane recovered from imported oil that is added to the extraction plant inventory.

$SOLV_A$ = Gallons of solvent added or removed from the extraction solvent inventory during normal operating period "i" as determined in accordance with 40 CFR § 63.2853(a)(5).

n = Number of normal operating periods in a calendar month.

Equation 3A:

40 CFR § 63.2854
Monthly Weighted Average HAP Content: By the end of each calendar month following an operating month, calculate weighted average HAP content (volume fraction). The monthly weighted average HAP content is to be determined using the following equation:

$$\text{Monthly Average HAP content Extraction Solvent (volume fraction)} = \frac{\sum_{i=1}^{n} (Received_i * Content_i)}{Total\ Received}$$

Equation 3A

Where:

$Received_i$ = Gallons of extraction solvent received in delivery "i" as determined in accordance with 40 CFR § 63.2853(a)(4).

$Content_i$ = The volume fraction of HAP in extraction solvent delivery "i" as determined in accordance with 40 CFR § 63.2854(b)(1).

Total Received = Total gallons of extraction solvent received since the end of the previous operating month.

n = Number of extraction solvent deliveries since the end of the previous operating month

Equation 4A:

40 CFR § 63.2854
12-month Weighted Average of HAP Content of Solvent Received:

$$\text{12-month Weighted Average HAP } \textit{Content in Solvent Received} = \frac{\sum_{i=1}^{12} (Received_i * Content_i)}{Total\ Received}$$

Equation 4A

Where:

$Received_i$ = Gallons of extraction solvent received in operating month "i" as determined in accordance with 40 CFR § 63.2853(a)(4).

$Content_i$ = Average volume fraction of HAP in extraction solvent received in operating month "i" as determined in accordance with 40 CFR § 63.2854(b)(1).

Total Received = Total gallons of extraction solvent received during the previous 12 operating months.

Equation 5A:

40 CFR § 63.2855
Oilseed Quantity Processed: By the end of each calendar month following an operating month, calculate the monthly quantity of each oilseed processed by using the following equation:

$$Monthly\ Quantity\ of\ Canola\ \text{Pr}ocessed\ (tons) = \sum_{i}^{n} (SEED_B - SEED_E + SEED_R \pm SEED_A)_i$$

Equation 5A

Where:

$SEED_B$ = Tons of canola in the inventory at the beginning of normal operating period "i" as determined in accordance with 40 CFR § 63.2855(a)(3).

$SEED_E$ = Tons of canola in the inventory at the end of normal operating period "i" as determined in accordance with 40 CFR § 63.2855(a)(3).

$SEED_R$ = Tons of canola received during normal operating period "i" as determined in accordance with 40 CFR § 63.2855(a)(4).

$SEED_A$ = Tons of canola added or removed from the oilseed inventory during normal operating period "i" as determined in accordance with 40 CFR § 63.2855(a)(5).

n = Number of normal operating periods in the calendar month during which canola was processed.

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Equation 1B:

40 CFR§ 63.115(d)(2)(iii)
The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1 \left(\sum_{j=1}^{n} C_j H_j \right) (1 - B_{ws})$$

Equation 6B

Where:

H_T = Net heating value of the sample, megaJoule per standard cubic meter, where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 millimeters of mercury, but the standard temperature for determining the volume corresponding to one mole is 20 °C, as in the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} (parts per million)−1 (gram-mole per standard cubic meter) (megaJoule per kilocalorie), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

B_{ws} = Water vapor content of the vent stream, proportion by volume; except that if the vent stream passes through a final steam jet and is not condensed, it shall be assumed that $B_{ws} = 0.023$ in order to correct to 2.3 percent moisture.

C_j = Concentration on a dry basis of compound j in parts per million, as measured for all organic compounds by Method 18 of 40 CFR part 60, appendix A and measured for hydrogen and carbon monoxide by American Society for Testing and Materials D1946–77 as indicated in 40 CFR § 63.115(d)(2)(ii).

H_j = Net heat of combustion of compound j, kilocalorie per gram-mole, based on combustion at 25 °C and 760 millimeters mercury. The heats of combustion of vent stream components shall be determined using American Society for Testing and Materials D2382–76 if published values are not available or cannot be calculated

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Equation 2B:

40 CFR § 63.115(d)(2)(iv)
The emission rate of TOC (minus methane and ethane) (ETOC) and the emission rate of total organic HAP (EHAP) in the vent stream shall both be calculated using the following equation:

$$E = K_2 \left[\sum_{j=1}^{n} C_j M_j \right] Q_s$$

Equation 7B

Where:

E = Emission rate of TOC (minus methane and ethane) or emission rate of total organic HAP in the sample, kilograms per hour.

K_2 = Constant, 2.494×10−6 (parts per million)−1 (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20°C.

C_j = Concentration on a dry basis of organic compound j in parts per million as measured by Method 18 of 40 CFR part 60, appendix A as indicated in 40 CFR § 63.115(d)(2)(ii). If the TOC emission rate is being calculated, C_j includes all organic compounds measured minus methane and ethane; if the total organic HAP emission rate is being calculated, only organic HAP compounds listed in table 2 in 40 CFR pt. 63, subp. F of this part are included.

M_j = Molecular weight of organic compound j, gram/gram-mole.

Q_s = Vent stream flow rate, dry standard cubic meter per minute, at a temperature of 20°C.

Equation 3B:

40 CFR § 63.115(d)(2)(v)(B)
The following equation shall be used to calculate the mass emission rate of halogen atoms:

$$E = K_2 Q \left(\sum_{j=1}^{n} \sum_{i=1}^{m} C_j * L_{ji} * M_{ji} \right)$$

Equation 8B

Where:

E = mass of halogen atoms, dry basis, kilogram per hour.

K_2 = Constant, 2.494×10−6 (parts per million)−1 (kilogram-mole per standard cubic meter) (minute/hour), where standard temperature is 20°C.

C_j = Concentration of halogenated compound j in the gas stream, dry basis, parts per million by volume.

M_{ji} = Molecular weight of halogen atom i in compound j of the gas stream, kilogram per kilogram-mole.

L_{ji} = Number of atoms of halogen i in compound j of the gas stream.

Q = Flow rate of gas stream, dry standard cubic meters per minute, determined according to 40 CFR § 63.115(d)(1) or (d)(2)(i).

j = Halogenated compound j in the gas stream.

i = Halogen atom i in compound j of the gas stream.

n = Number of halogenated compounds j in the gas stream.

m = Number of different halogens i in each compound j of the gas stream.

Equation 4B:

40 CFR § 63.115(d)(3)
The equation for calculating the TRE index for a vent stream controlled by a flare or incinerator is as follows:

$$TRE = \frac{1}{E_{HAP}}\left[a + b(Q_s) + c(H_T) + d(E_{TOC})\right]$$

Equation 9B

Where:

TRE = TRE index value.

E_{HAP} = Hourly emission rate of total organic HAP, kilograms per hour, as calculated in 40 CFR § 63.115(d)(1) or (2)(iv).

Q_s = Vent stream flow rate, standard cubic meters per minute, at a standard temperature of 20 °C, as calculated in 40 CFR § 63.115(d)(1) or (2)(i).

H_T = Vent stream net heating value, megaJoules per standard cubic meter, as calculated in 40 CFR § 63.115(d)(1) or (2)(iii).

E_{TOC} = Emission rate of TOC (minus methane and ethane), kilograms per hour, as calculated in 40 CFR § 63.115(d)(1) or (2)(iv).

a,b,c,d = Coefficients presented in table 1 of 40 CFR pt. 63, subp. G, selected in accordance with 40 CFR § 63.115(d)(3)(ii) and (iii).

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Equation 5B:

40 CFR § 63.1025(b)
The overall performance of total valves in the applicable process unit or group of process units shall be calculated as a weighted average of the percent leaking valves by using the following equation:

$$\%V_{LO} = \frac{\sum_{i=1}^{n}\left(\%V_{Li} \times V_i\right)}{\sum_{i=1}^{n} V_i}$$

Equation 10B

Where:

$\%V_{LO}$ = Overall performance of total valves in the applicable process unit or group of process units

$\%V_{Li}$ = Percent leaking valves in subgroup i, most recent value calculated according to the procedures in 40 CFR § 63.1025(c)(1)(ii) and (c)(2).

V_i = Number of valves in subgroup i.

n = Number of subgroups.

Equation 6B:

40 CFR § 63.1025(c)
The percent leaking valves for each monitoring period for each process unit or valve subgroup shall be calculated by using the following equation:

$$\%V_L = \left(V_L / V_T\right) \times 100$$

Equation 6B

Where:

$\%V_L$ = Percent leaking valves.

V_L = Number of valves found leaking, excluding nonrepairable valves, as provided 40 CFR § 63.1025(c)(3), and including those valves found leaking pursuant to 40 CFR § 63.1025(d)(2)(iii)(A) and (B).

V_T = The sum of the total number of valves monitored.

Equation 7B:

40 CFR § 63.1026(c)
The percent leaking pumps shall be calculated by using the following equation:

APPENDIX B
40 CFR pt. 63, subp. FFFF Equations
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

$$\%P_L = \left((P_L - P_S)/(P_T - P_S)\right) \times 100$$

Equation 7B

Where:

$\%P_L$ = Percent leaking pumps

P_L = Number of pumps found leaking as determined through monthly monitoring as required 40 CFR § 63.1026(b)(1). Do not include results from inspection of unsafe-to-monitor pumps pursuant to 40 CFR § 63.1026(e)(6).

P_S = Number of pumps leaking within 1 month of start-up during the current monitoring period.

P_T = Total pumps in regulated material service, including those meeting the criteria in 40 CFR § 63.1026(e)(1)-(3) and (6).

Equation 8B:

40 CFR § 63.1027(c)
The percent leaking connectors as used in 40 CFR § 63.1027(a) and (b)(3) shall be calculated by using the following equation:

$$\%C_L = C_L/C_t \times 100$$

Equation 8B

Where:

$\%C_L$ = Percent leaking connectors as determined through periodic monitoring required in 40 CFR § 63.1027(a) and (b)(3)(i)-(iii).

C_L = Number of connectors measured at 500 parts per million or greater, by the method specified in 40 CFR § 63.1023(b).

C_t = Total number of monitored connectors in the process unit or affected facility.

Equation 9B:

40 CFR § 63.987(b)
The percent leaking connectors as used in 40 CFR § 63.1027(a) and (b)(3) shall be calculated by using the following equation:

$$H_T = K_1 \sum_{j-1}^{n} D_j H_j$$

Equation 9B

Where:

H_T = Net heating value of the sample, megajoules per standard cubic meter; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 millimeters of mercury (30 inches of mercury), but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$K_1 = 1.740 \times 10^{-7}$(parts per million by volume)$^{-1}$(gram-mole per standard cubic meter) (megajoules per kilocalories), where the standard temperature for gram mole per standard cubic meter is 20 °C;

n = number of sample components;

D_j= Concentration of sample component j, in parts per million by volume on a wet basis, as measured for organics by Method 18 of 40 CFR part 60, appendix A, or by American Society for Testing and Materials (ASTM) D6420–99 (available for purchase from at least one of the following addresses: 100 Barr Harbor Drive, West Conshohocken, PA 19428–2959; or University Microfilms International, 300 North Zeeb Road, Ann Arbor, MI 48106) under the conditions specified in 40 CFR § 63.997(e)(2)(iii)(D)(1)-(3). Hydrogen and carbon monoxide are measured by ASTM D1946–90; and

H_j= Net heat of combustion of sample component j, kilocalories per gram mole at 25 °C and 760 millimeters of mercury (30 inches of mercury).

APPENDIX C
Quality Improvement Program for Pumps (40 CFR pt. 63, subp. UU)
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Quality Improvement Program (QIP) Requirements: The quality improvement program shall meet the requirements detailed in this Appendix C.

(1) The Permittee shall comply with the requirements in 40 CFR § 63.1026.

(2) Data collection: The Permittee shall collect the data specified below (items (i) through (v)) and maintain records for each pump in each process unit or affected facility (or plant site) subject to the quality improvement program. The data may be collected and the records may be maintained on a process unit, affected facility, or plant site basis.

(i) Pump type (e.g., piston, horizontal or vertical centrifugal, gear, bellows); pump manufacturer; seal type and manufacturer; pump design (e.g., external shaft, flanged body); materials of construction; if applicable, barrier fluid or packing material; and year installed.

(ii) Service characteristics of the stream such as discharge pressure, temperature, flow rate, corrosivity, and annual operating hours.

(iii) The maximum instrument readings observed in each monitoring observation before repair, response factor for the stream if appropriate, instrument model number, and date of the observation.

(iv) If a leak is detected, the repair methods used and the instrument readings after repair.

(v) If the data will be analyzed as part of a larger analysis program involving data from other plants or other types of process units or affected facilities, a description of any maintenance or quality assurance programs used in the process unit or affected facility that are intended to improve emission performance.

(3) The Permittee shall continue to collect data on the pumps as long as the process unit or affected facility (or plant site) remains in the quality improvement program.

(4) Pump or pump seal inspection: The Permittee shall inspect all pumps or pump seals that exhibited frequent seal failures and were removed from the process unit or affected facility due to leaks. The inspection shall determine the probable cause of the pump seal failure or of the pump leak and shall include recommendations, as appropriate, for design changes or changes in specifications to reduce leak potential.

(5) Data analysis:

(i) The Permittee shall analyze the data collected to comply with the requirements of 40 CFR § 63.1035(d)(2) (Data Collection, as detailed earlier in this Appendix C) to determine the services, operating or maintenance practices, and pump or pump seal designs or technologies that have poorer than average emission performance and those that have better than average emission performance. The analysis shall determine if specific trouble areas can be identified on the basis of service, operating conditions or maintenance practices, equipment design, or other process-specific factors.

(ii) The analysis shall also be used to determine if there are superior performing pump or pump seal technologies that are applicable to the service(s), operating conditions, or pump or pump seal designs associated with poorer than average emission performance. A superior performing pump or pump seal technology is one with a leak frequency of less than 10 percent for specific applications in the process

unit, affected facility, or plant site. A candidate superior performing pump or pump seal technology is one demonstrated or reported in the available literature or through a group study as having low emission performance and as being capable of achieving less than 10 percent leaking pumps in the process unit or affected facility (or plant site).

(iii) The analysis shall include consideration of the following information:

(A) The data obtained from the inspections of pumps and pump seals removed from the process unit or affected facility due to leaks;

(B) Information from the available literature and from the experience of other plant sites that will identify pump designs or technologies and operating conditions associated with low emission performance for specific services; and

(C) Information on limitations on the service conditions for the pump seal technology operating conditions as well as information on maintenance procedures to ensure continued low emission performance.

(iv) The data analysis may be conducted through an inter- or intra-company program (or through some combination of the two approaches) and may be for a single process unit, a plant site, a company, or a group of process units.

(v) The first analysis of the data shall be completed no later than 18 months after the start of the quality improvement program. The first analysis shall be performed using data collected for a minimum of 6 months. An analysis of the data shall be done each year the process unit or affected facility is in the quality improvement program.

(6) Trial evaluation program: A trial evaluation program shall be conducted at each plant site for which the data analysis does not identify use of superior performing pump seal technology or pumps that can be applied to the areas identified as having poorer than average performance, except as provided in item (v) below. The trial program shall be used to evaluate the feasibility of using in the process unit or affected facility (or plant site) the pump designs or seal technologies, and operating and maintenance practices that have been identified by others as having low emission performance.

(i) The trial evaluation program shall include on-line trials of pump seal technologies or pump designs and operating and maintenance practices that have been identified in the available literature or in analysis by others as having the ability to perform with leak rates below 10 percent in similar services, as having low probability of failure, or as having no external actuating mechanism in contact with the process fluid. If any of the candidate superior performing pump seal technologies or pumps is not included in the performance trials, the reasons for rejecting specific technologies from consideration shall be documented as required 40 CFR § 63.1035(e)(3)(ii).

(ii) The number of pump seal technologies or pumps in the trial evaluation program shall be the lesser of 1 percent or two pumps for programs involving single process units or affected facilities and the lesser of 1 percent or five pumps for programs involving a plant site or groups of process units or affected facilities. The minimum number of pumps or pump seal technologies in a trial program shall be one.

(iii) The trial evaluation program shall specify and include documentation of the following information:

(A) The candidate superior performing pump seal designs or technologies to be evaluated, the stages for evaluating the identified candidate pump designs or pump seal technologies, including the time period necessary to test the applicability;

(B) The frequency of monitoring or inspection of the equipment;

(C) The range of operating conditions over which the component will be evaluated; and

(D) Conclusions regarding the emission performance and the appropriate operating conditions and services for the trial pump seal technologies or pumps.

(iv) The performance trials shall initially be conducted, at least, for a 6-month period beginning not later than 18 months after the start of the quality improvement program. No later than 24 months after the start of the quality improvement program, the Permittee shall have identified pump seal technologies or pump designs that, combined with appropriate process, operating, and maintenance practices, operate with low emission performance for specific applications in the process unit or affected facility. The Permittee shall continue to conduct performance trials as long as no superior performing design or technology has been identified, except as provided in item (vi) below. The initial list of superior emission performance pump designs or pump seal technologies shall be amended in the future, as appropriate, as additional information and experience are obtained.

(v) Any plant site with fewer than 400 valves and owned by a corporation with fewer than 100 employees shall be exempt from trial evaluations of pump seals or pump designs. Plant sites exempt from the trial evaluations of pumps shall begin the pump seal or pump replacement program at the start of the fourth year of the quality improvement program.

(vi) The Permittee who has conducted performance trials on all alternative superior emission performance technologies suitable for the required applications in the process unit or affected facility may stop conducting performance trials provided that a superior performing design or technology has been demonstrated or there are no technically feasible alternative superior technologies remaining. The Permittee shall prepare an engineering evaluation documenting the physical, chemical, or engineering basis for the judgment that the superior emission performance technology is technically infeasible or demonstrating that it would not reduce emissions.

(7) Quality assurance program: The Permittee shall prepare and implement a pump quality assurance program that details purchasing specifications and maintenance procedures for all pumps and pump seals in the process unit or affected facility. The quality assurance program may establish any number of categories, or classes, of pumps as needed to distinguish among operating conditions and services associated with poorer than average emission performance as well as those associated with better than average emission performance. The quality assurance program shall be developed considering the findings of the data analysis required under 40 CFR § 63.1035(d)(5); and, if applicable, the findings of the trial evaluation required 40 CFR § 63.1035(d)(6); and the operating conditions in the process unit or affected facility. The quality assurance program shall be updated each year as long as the process unit or affected facility has the greater of either 10 percent or more leaking pumps or has three leaking pumps.

(i) The quality assurance program shall meet the following requirements:

(A) Establish minimum design standards for each category of pumps or pump seal technology. The design standards shall specify known critical parameters such as tolerance, manufacturer, materials of construction, previous usage, or other applicable identified critical parameters;

(B) Require that all equipment orders specify the design standard (or minimum tolerances) for the pump or the pump seal;

(C) Provide for an audit procedure for quality control of purchased equipment to ensure conformance with purchase specifications. The audit program may be conducted by the Permittee of the plant site or process unit or affected facility, or by a designated representative; and

(D) Detail off-line pump maintenance and repair procedures. These procedures shall include provisions to ensure that rebuilt or refurbished pumps and pump seals will meet the design specifications for the pump category and will operate so that emissions are minimized.

(ii) The quality assurance program shall be established no later than the start of the third year of the quality improvement program for plant sites with 400 or more valves or 100 or more employees; and no later than the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees.

(8) Pump or pump seal replacement: Three years after the start of the quality improvement program for plant sites with 400 or more valves or 100 or more employees and at the start of the fourth year of the quality improvement program for plant sites with less than 400 valves and less than 100 employees, the Permittee shall replace, as described in items (i) and (ii) below, the pumps or pump seals that are not superior emission performance technology with pumps or pump seals that have been identified as superior emission performance technology and that comply with the quality assurance standards for the pump category. Superior emission performance technology is that category or design of pumps or pump seals with emission performance that when combined with appropriate process, operating, and maintenance practices, will result in less than 10 percent leaking pumps for specific applications in the process unit, affected facility, or plant site. Superior emission performance technology includes material or design changes to the existing pump, pump seal, seal support system, installation of multiple mechanical seals or equivalent, or pump replacement.

(i) Pumps or pump seals shall be replaced at the rate of 20 percent per year based on the total number of pumps in light liquid service. The calculated value shall be rounded to the nearest nonzero integer value. The minimum number of pumps or pump seals shall be one. Pump replacement shall continue until all pumps subject to the requirements of 40 CFR § 63.1026 are pumps determined to be superior performance technology.

(ii) The Permittee may delay replacement of pump seals or pumps with superior technology until the next planned process unit or affected facility shutdown, provided the number of pump seals and pumps replaced is equivalent to the 20 percent or greater annual replacement rate.

(iii) The pumps shall be maintained as specified in the quality assurance program.

APPENDIX D
Insignificant Activities and Applicable Requirements
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

The table below lists the insignificant activities that are allowed at the facility and their associated general applicable requirements.

Minn. R. 7007.1300, subpart	Rule Description of the Activity	Likely Applicable Requirement
3(G)	Emissions from a laboratory, as defined in the rule	Minn. R. 7011.0715 (PM and opacity)
2(D)(3)	Blending and bleaching tanks	NA- to be vented indoors
3(I)	Individual emissions units at a stationary source, each of which have a potential to emit the following pollutants in amounts less than: 1. 4,000 lbs/year of carbon monoxide; and 2. 2,000 lbs/year each of nitrogen oxide, sulfur dioxide, particulate matter, particulate matter less than ten microns, volatile organic compounds (including hazardous air pollutant-containing VOC), and ozone. *The Permittee will have 14 storage tanks that qualify under this subpart. In the permit application, these are identified as IA 005-012, IA 014-017, IA 019, and IA 020.*	Minn. R. 7011.0715 (PM and opacity)

APPENDIX E
AERA Modeled Parameters
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Stack Modeled Parameters
(Stack requirements are a state only permit condition and relate to the AERA only)

Emission Stack/Vent ID SV	Emission Source ID	Description	RASS Stack ID	Stack Height (m)	Exhaust Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	PM_{10} Emissions (lb/hr)	VOC Emissions (lb/hr)
001	EU 008	Seed Cleaner & Aspirator	15	42.67	294.26	14.67	0.64	0.86	NA
002	EU 010	Flaker Cyclone	16	42.67	333.15	15.2	1.25	10.84	c
	EU 015	Meal Grinder Baghouse							
	EU 016	Pellet Cooler Cyclone							
003	EU 009	Conditioner Cyclone	17	42.67	335.93	14.67	1.19	11.83	c
	EU 011	Cooker Cyclone							
	EU 012	Cake Cooler Cyclone							
004	EU 013	DTDC Dryer Deck Cyclone #1	6	45.72	338.71	10.78	0.91	21.89	21.89
	EU 003	DTDC Dryer Deck Cyclone #2							
	EU 014	DTDC Cooler Deck Cyclone							
005	EU 007	Canola Seed Receiving	18	42.67	294.26	15.38	0.88	1.71	c
006	EU 004	High Pressure Boiler [b]	4,5	45.72	505.37	7.24	0.76	0.04	0.04
007	EU 001	Boiler 1 [b]	1,2,3	45.72	505.37	12.34	1.37	0.55	0.55
	EU 002	Boiler 2 [b]							
008	EU 017	Meal & Pellet Storage and Loadout	19	42.67	294.26	15.08	0.82	1.46	c
012	EU 018	Mineral Oil Scrubber	13	28.96	338.71	1.46	0.20	2.43	2.43
NA	FS 001	Extraction Fugitive Leaks [a]	7					24.32	24.32
010	EU 019	Biodiesel Process Vent [a]	8					0.005	0.005
NA	EU 020	Biodiesel Loadout [a]	9					0.01	0.01
011	EU 021	Flare	10	13.72	1273.00	20.00	1.02	0.03	0.03
NA	FS 003	Biodiesel Fugitive Leaks [a]	11					0.12	0.12

Document in Delta

APPENDIX E
AERA Modeled Parameters
Facility Name: Northstar Agri Industries, LLC
Permit Number: 06900025-002

Stack Modeled Parameters (Stack requirements are a state only permit condition and relate to the AERA only)									
Emission Stack/Vent ID SV	Emission Source ID	Description	RASS Stack ID	Stack Height (m)	Exhaust Temperature (K)	Exit Velocity (m/s)	Stack Diameter (m)	PM_{10} Emissions (lb/hr)	VOC Emissions (lb/hr)
NA	Tanks	Storage Tanks [a]	12					0.06	0.06

[a] These sources were modeled as volume sources using SCREEN3. See AERA documentation for more information.
[b] These sources were modeled with multiple RASS stacks to account for emissions from different fuels. The maximum emission rate was chosen from the different fuels.
[c] These sources only have particulate matter emissions.

TECHNICAL SUPPORT DOCUMENT
For
AIR EMISSION PERMIT NO. 06900025-002

This technical support document is intended for all parties interested in the permit and to meet the requirements that have been set forth by the federal and state regulations (40 CFR § 70.7(a)(5) and Minn. R. 7007.0850, subp.1). The purpose of this document is to provide the legal and factual justification for each applicable requirement or policy decision considered in the determination to issue the permit.

1 General Information

1.1 Applicant and Stationary Source Location:

Applicant/Address	Stationary Source/Address (SIC Code: 2079)
Northstar Agri Industries, LLC 15 Broadway, Suite 600 Fargo, ND 58102	2100 US Highway 75 Kennedy Kittson County
Contact: Neil Juhnke Phone: 701-478-5848	

1.2 Description of the Permit Action

The total facility operating permit authorizes Northstar Agri Industries, LLC (Northstar) to construct and operate a canola oil processing facility consisting of a 1,000 ton/day canola oilseed extraction plant and a 2,700,000 gallon/year biodiesel plant, located in Kittson County southwest of the city of Hallock, Minnesota (Facility). It will be located on what is currently cultivated farmland.

The Facility will consist of a 1,000 ton/day canola oilseed extraction unit, a 2.7 million gallon/year biodiesel plant, canola oilseed receiving and handling equipment, two 51.4 million British thermal units per hour (MMBtu/hr) natural gas-fired boilers with propane and distillate fuel as backup fuels, one 8.0 MMBtu/hr natural gas-fired boiler with propane as a backup fuel, a fire pump engine, and a cooling tower.

The Facility will receive raw canola seeds and process them, extracting crude canola oil from the seeds. A by-product of the oil processing is canola meal, which is sold for animal feed. The Facility is designed to process any oilseed but cannot process soybeans. The Facility will be operated to serve the edible oils, animal feed nutrient meal, and biofuels markets.

The boilers will provide steam for the oil extraction. Emissions from the boilers consist of Particulate Matter (PM), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), Nitrogen Oxides (NO_x), Sulfur Dioxide (SO_2), Carbon Monoxide (CO), and Volatile Organic Compound (VOC) emissions. The 8.0 MMBtu/hr boiler supports the 'refinery'

portion of the Facility (see further detail below). A small portion of the steam created by the two larger boilers will be used by the co-located biodiesel plant.

Canola oilseeds will be received from local farmers and regional grain elevators via semi-trailer truck and railcar. The canola oilseeds will be off-loaded onto conveyors that will have aspiration and a bar separator with magnet to remove ferrous and large foreign objects before going into on-site elevators. The Facility will have a total oilseed storage capacity of 1.5 million bushels. After cleaning, the oilseeds will be conveyed to temporary storage bins. Emissions in the receiving section consist of PM/PM_{10} emissions from product unloading, storage and transferring and will be controlled by fabric filter baghouses.

In the preparation section, the canola oilseeds are cleaned, conditioned and rolled flat into "flakes". The flakes are conveyed to the flake cooker and heated to approximately 200 degrees Fahrenheit. Cooked flakes are then pressed to release crude canola oil. The remaining "cake" is cooled in the cake cooler and transferred to the extraction section. The emissions in the preparation section consist of PM/PM_{10} emissions from the cleaning, conditioning, and flaking of the oilseeds and will be controlled by fabric filter baghouses or will have high efficiency process cyclones used to recover economically valuable commodities, namely canola and cake.

Inside the extraction building, the cake is washed in an extractor with commercial grade hexane, which strips the oil from the flakes. Two process streams leave the extractor: commercial hexane-laden cake and miscella, which is a mixture of commercial hexane, oil, and water. The miscella is separated into its components – oil, commercial hexane, and water – using distillation processes. The separated oil is termed crude oil, which will be further refined and sold.

Emissions from the solvent extraction section include VOC and PM/PM_{10} emissions from the extraction vent system, Desolventizer-Toaster/Dryer-Cooler (DTDC) vent, and fugitive sources (equipment leaks). PM/PM_{10} emissions will be exhausted from high efficiency process cyclones used to recover the economically valuable meal commodity. A solvent recovery system will recapture the majority of the VOC (hexane) emissions for reuse in the process. After startup and shakedown, the Facility will recover nearly all of the commercial hexane and re-use it in the extractor.

The meal cake is "desolventized" by subjecting the commercial hexane-laden meal cake to heat. The meal is cooled, ground or pelletized, and conveyed to storage bins. The desolventized meal, whether ground or pelletized is sold as an animal feed. The commercial hexane that is driven off of the meal is piped to the solvent recovery system for re-use. A portion of the hexane solvent is "fixed" to the meal during the desolventizing process and cannot be recovered. The meal will be shipped from the site primarily in bulk quantities via trucks and railcars. The emissions in the meal section consist of PM/PM_{10} emissions from the grinding, pelletizing, and loadout of the meal and will be exhausted from high efficiency process cyclones and a process fabric filter baghouse or controlled by a fabric filter baghouse.

The refining process removes gums, colors, tastes, and odorous compounds from the crude oil to produce a product typically referred to as "salad oil". The refining process also produces valuable by-products including fatty acids and distillates. Emissions from the refinery section include PM/PM_{10} emissions from bleaching and filtering. The refinery section will also have one

8 MMBtu/hr boiler that supplies high-pressure steam to the deodorizer process. This refinery boiler will be designed to burn natural gas primarily, with propane as a backup fuel. Emissions from the high-pressure boiler consist of PM, PM_{10}, NO_x, SO_2, CO, and VOC emissions.

The biodiesel plant will receive refined vegetable oil from both the extraction plant and outside sources and process the vegetable oil into biodiesel (methyl esters). The process involves the esterification of soybean oil or other vegetable oils to produce biodiesel using the methanol based catalyst, sodium methoxide. The plant will have two continuous flow reactors for the esterification process.

The biodiesel plant will receive steam from the two large boilers located in the extraction plant. Emissions from the biodiesel plant consist mainly of VOC and methanol from the storage tanks, biodiesel loadout, fugitive, flare and biodiesel process vent.

All of the process streams in the biodiesel plant are vented to the water absorber which vents to the atmosphere. The water absorber is designed to recover a majority of the methanol used in the process for reuse. The flare will control VOC and methanol emissions from the methanol storage tank and the biodiesel loadout.

1.3 Description of the Activities Allowed by this Permit Action

An administrative amendment application was received December 24, 2007 in accordance with Minn. R. 7007.1400, subp. 1(B) that requested a change of name for the company owner of the permitted facility. Northstar Bioenergy's corporate name will now be "Northstar Agri Industries, LLC". There is no change in ownership or location of the Hallock, MN oilseed extraction plant associated with this name change.

The permit was also updated to keep all permits issued by the MPCA uniform. The only requirement that was added was a record keeping requirement, Minn. R. 7007.1200, subp. 4.

2 Conclusion

Based on the information provided by Northstar Agri Industries, LLC, the MPCA has reasonable assurance that the proposed operation of the emission facility, as described in the Air Emission Permit No. 06900025-002 and this technical support document, will not cause or contribute to a violation of applicable federal regulations and Minnesota Rules.

Staff Members on Permit Team: Jake Swaggert (permit writer/engineer)
Tarik Hanafy (peer reviewer)

AQ File No. 4338; DQ 1826

Attachment: Facility Description and CD-01 Forms (paper copy only)